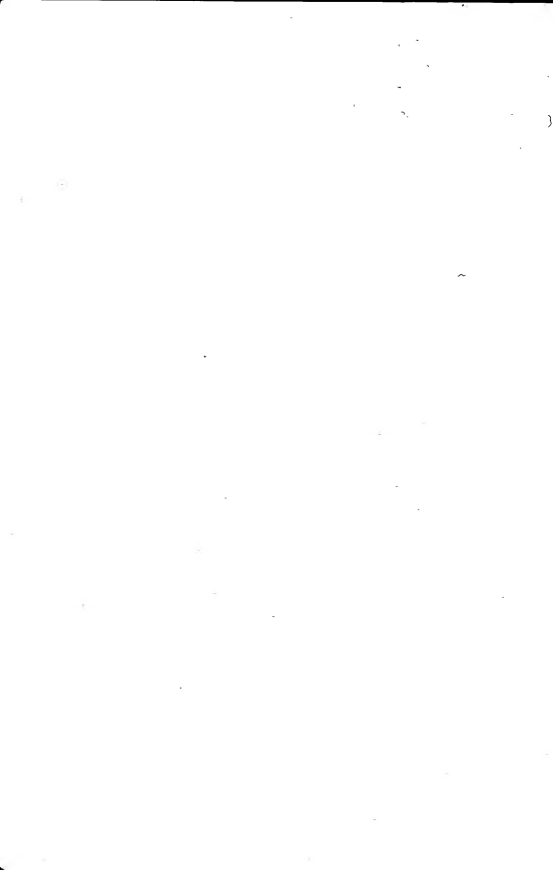


# Internal Migration in Canada

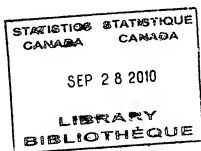
## Demographic Analyses

BY M. W. GEORGE





D. Potvin.





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# ***Internal Migration in Canada***

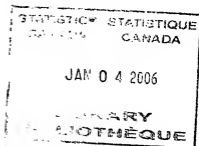
**DEMOGRAPHIC ANALYSES**

by

**M.V. George**

**Demographic Analysis and Research Section  
Census Division**

**ONE OF A SERIES OF 1961 CENSUS MONOGRAPHS**



**DOMINION BUREAU OF STATISTICS**

**OTTAWA, CANADA**

**1970**

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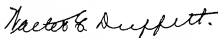
## Foreword

The Canadian Censuses constitute a rich source of information about individuals and their families, extending over many years. The census data are used widely but it has proved to be worthwhile in Canada, as in some other countries, to supplement census statistical reports with analytical monographs on a number of selected topics. The 1931 Census was the basis of several valuable monographs but, for various reasons, it was impossible to follow this precedent with a similar programme until 1961. Moreover, the 1961 Census had two novel features. In the first place, it provided much new and more detailed data, particularly in such fields as income, internal migration and fertility, and secondly, the use of an electronic computer made possible a great variety of tabulations on which more penetrating analytical studies could be based.

The purpose of the 1961 Census Monograph Programme is to provide a broad analysis of social and economic phenomena in Canada. Although the monographs concentrate on the results of the 1961 Census, they are supplemented by data from previous censuses and by statistical material from other sources. In addition to this volume on *Internal Migration in Canada: Demographic Analyses*, its companion volume *Migration in Canada: Regional Aspects* and a Series of Labour Force Studies, monographs have been published on urban development, fertility, marketing, income and immigration.

I should like to express my appreciation to the universities that have made it possible for members of their staff to contribute to this Programme, to authors within the Dominion Bureau of Statistics who have put forth extra effort in preparing their studies, and to a number of other members of DBS staff who have given assistance. The Census Monograph Programme is considered desirable not only because the analysis by the authors throws light on particular topics but also because it provides insight into the adequacy of existing data and guidance in planning the content and tabulation programmes of future censuses. Valuable help in designing the Programme was received from a committee of Government officials and university professors. In addition, thanks are extended to the various readers, experts in their fields, whose comments were of considerable assistance to the authors.

Although the monographs have been prepared at the request of and published by the Dominion Bureau of Statistics, responsibility for the analyses and conclusions is that of the individual authors.



DOMINION STATISTICIAN.



## Preface

This is the second of the two volumes comprising the 1961 Census Monograph on Migration in Canada. The first volume, *Migration in Canada: Regional Aspects* by Dr. Leroy O. Stone of DBS emphasizes the socio-economic aspects of migration in Canada. The late Dr. Yoshiko Kasahara was responsible for the writing of the migration monograph until her untimely death and the author wishes to make a special acknowledgement to her contribution. Her outline of the monograph helped very much in dividing the contents for the two volumes. Also, Dr. Kasahara played a significant role in the design of the migration tabulations for the 1961 Census that form a major part of the data used for the present study.

As mentioned in the Introduction, the purpose of this monograph is to measure and describe the volumes, trends, streams and patterns of internal migration in Canada, using mainly the birth-residence data for the intercensal periods 1931-1961 and the detailed migration data in the 1961 Census for the period 1956-1961. The series of migration estimates based on birth-residence data for the period 1931-1961 is important methodologically and it adds another dimension to the historical and substantive analysis of internal migration. It must be emphasized, however, that this is an exploratory study to the estimation and demographic analyses of migration in Canada. It is hoped that this volume, with its companion volume will provide a useful compendium of basic migration data, stimulate interest in the subject and open new avenues for further research in this field.

In writing this monograph, the author has received much help from others in a variety of ways. The writer is grateful to Dr. Karol Krótki, former Assistant-Director (Research) of the Census Division of the Dominion Bureau of Statistics, who assigned this work and to Mr. W.D. Porter, Director of the Census Division, for his support and encouragement in completing it. Special thanks are due to the referees of the monograph, Professors James D. Tarver of the University of Georgia and Frank T. Denton of McMaster University, for their generous efforts in reviewing the whole manuscript and making helpful comments and suggestions. Thanks are also due to Dr. Hope T. Eldridge of the University of Pennsylvania and Dr. Leroy O. Stone for the benefit of their comments on Chapters Three and Four, and Chapter Three, respectively. The assistance received from members of the Census Division and several other staff members of the Dominion Bureau of Statistics is gratefully acknowledged.

Of these, the writer is particularly indebted to Mr. Herman G. Beyer who supervised the general progress of the work and did some preliminary copy editing, Mr. Roch Potvin who did most of the clerical work, Mr. George Kokich for providing a selected bibliography at the early stage of the work, Miss Ruth Hoxter for computer assistance, the Census Computing Pool under Mrs. Muriel Ellis, the Census Typing Pool under Mr. J.R.G. Lowe, the Census Proof Reading Unit under Miss M. Gaudreau and Mrs. V. Mercier, the Canada Year Book Staff, particularly the Assistant Director, Miss Margaret Pink, who undertook the task of finally editing the copy and seeing the manuscript through the press, and Mr. Laurent Tessier of the Drafting Unit under whose direction the charts were drawn. Also acknowledged with thanks is the assistance received from Mr. Michael Amyot who contributed to this work while employed as a Summer Assistant with the Demographic Analysis and Research Section.

The writer is solely responsible for the opinions expressed in this volume and for any blemishes or errors or faulty judgment that may appear therein.

M.V. George,  
*Chief, Demographic Analysis  
and Research Section,  
Census Division*

OTTAWA, 1969

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**SYMBOLS USED IN TABLES**

- = nil or zero.
- .. = not available.
- ... = category not applicable.

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## *Chapter One*

### **INTRODUCTION**

As a component of population growth and redistribution, internal migration occupies a central place in demographic analysis. Under normal conditions internal movements of people may be viewed as a mechanism by which local populations adjust themselves to given geographical differences in opportunity, and to spatial shifts in the pattern of economic opportunity and living conditions over time. Fundamental shifts in the Canadian economy generated by rapid progress of technological development and industrialization have undoubtedly operated as the major determinants of population redistribution in Canada over the past few decades. With the quickening pace of industrialization, the process of demographic and economic adjustment has manifested itself in migration from areas of surplus labour or limited opportunity to areas of expanding economic opportunities. Although there exist no historical data that permit a precise examination of the extent and patterns of migration in Canada prior to the 1961 Census, the heavy population movement triggered by the forces of industrial expansion is implied by the impressive growth of urban population that took place from the turn of the century to 1961, when over 70 per cent of the population lived in urban areas.<sup>1</sup> Internal migration also accounts for much of the differential rates of growth between regions, provinces, cities and counties. Because of the paucity of gross migration data, research on internal migration in the past has been focused mainly on the measurement and interpretation of net migration estimates which refer to the spatial units concerned and not to individuals because, unlike net migration, there is no such thing as a "net migrant". Of such research, mention may be made of the studies by Keyfitz (1950), Cameron and Hurd (1935), Buckley (1960), Farrar (1962), Sinclair (1966), and Anderson (1966).

Unlike the first volume of the 1961 Census Monograph on migration which deals with the economic and social aspects of migration and their interrelations (Stone, 1969), the present study is primarily a demographic analysis of internal migration. Its object is to measure and describe the volume, trends, streams and patterns of internal migration using mainly the province-of-birth and province-of-residence data for the intercensal periods 1931-1961, and the detailed migration data in the 1961 Census for the period 1956-1961. The migration data collected in the 1941 Census have

also been used on a limited scale mainly for comparison of the levels and patterns of migration.

The 1961 Census represents a very significant landmark in the study of internal migration in Canada. For the first time in the census history of Canada, an extraordinary mass of time-oriented data on migration became available making possible the study of levels and patterns of various types of migration, such as interregional, interprovincial, intraprovincial, intra-municipal and rural-urban migration. Further, in contrast to the migration estimates generally derived from the various "residual methods" (Siegel and Hamilton, 1952), these data provide information on the number of migrants and their characteristics in a specified period of time. The historical analysis is confined to interprovincial migration using the intercensal migration estimates by age and sex for the Canadian-born population derived from the province-of-birth data. For the first time, the detailed tabulations of province-of-birth data by age and sex in the Canadian censuses have been exploited as much as possible in this study for the historical analysis of interprovincial migration. In view of the fact that foreign-born population constitutes a significant proportion of the total population of Canada, the analysis has been made for Canadian born and foreign born separately. Unfortunately, all the available data have not been fully exploited. The tabulations of the 1961 migration data are so detailed that it would be possible to use them in a number of monographs, each concentrating on a different aspect of migration. However, it is hoped that this volume, with its companion volume, will stimulate interest in the subject and open new avenues for further research in this complex and relatively underdeveloped field in demography.

For the purpose of this study, interprovincial movements up to 1951 refer to migration among the nine provinces of Canada (excluding Newfoundland) and the two territories treated as a single unit; for the period after 1951, Newfoundland is included among the provinces. Five geographic regions of Canada are also considered for the regional analysis of migration for 1951-1961.

This study has eight chapters. The introductory chapter is followed by two chapters that are conceptual and methodological in nature; four chapters that contain the substantive material of the study, each concluded with a brief summary; and a final chapter summarizing the findings of the complete study.

*Chapter Two* reviews the concepts of migration, provides operational definitions and describes the available data and their limitations. The concepts and definitions are closely linked with the measurement of migration and the interpretation of the migration data used. Terms and concepts not

explained in this chapter are explained at the appropriate places in subsequent chapters. *Chapter Three*, which is devoted to the estimation of migration and explanation of the methodology, is the foundation for the substantive discussions in the descriptive chapters. Migration estimates are made separately for the Canadian-born and the foreign-born population. Most of *Chapter Three* is devoted to the estimation of decennial interprovincial migration, by age and sex, for Canadian-born persons from place-of-birth and residence data for 1931-1961 and an evaluation of these estimates.

The substantive description and analysis begins in *Chapter Four*, in which a brief discussion of the growth and redistribution of the population in Canada is followed by an analysis of the separate roles of migration and natural increase on population growth and redistribution during 1931-1961. *Chapter Five* presents a historical analysis of the levels and trends in interprovincial migration of the Canadian born and foreign born. Here migration patterns are established, trends are pinpointed, and gaining and losing provinces are identified. In *Chapter Six* the dominant migration streams in terms of their volume, direction and age selectivity are identified by the simultaneous consideration of origin and destination. In the second part of this chapter the flows of migration among urban and rural areas are examined for 1956-1961. *Chapter Seven* treats the age, sex and marital status characteristics of the various types of migrants. *Chapter Eight* summarizes the chief findings of this study and draws some conclusions concerning further investigation of the available statistics.

The main text of the monograph is accompanied by some appendix tables (Appendix A) which are the sources of many of the chapter tables and charts; the detailed procedures used in making the decade interprovincial migration estimates from the place-of-birth data are explained in a technical appendix (Appendix B).

#### FOOTNOTE TO CHAPTER ONE

<sup>1</sup> According to the 1966 Census, 73.6 per cent of the Canadian population was urban; urban population consists of population living in cities, towns and villages of 1,000 and over; whether incorporated or not. For details of urban growth in Canada and the factors underlying the patterns of urban change, see Leroy O. Stone, 1967<sup>b</sup>.



## ***Chapter Two***

# ***CONCEPTS, DEFINITIONS AND AN EVALUATION OF BASIC DATA***

Before presenting the major aspects of this study, a brief review of the concepts of migration, operational definitions, the available data, and their limitations is in order. The very organization of the study, as well as its basic orientation, is determined by the operational definition of internal migration adopted and by what can be done within the limits of the available data.

### **2.1 BASIC MIGRATION CONCEPTS**

The basic migration terms used in the present study are defined in this section; terms and concepts not explained here are mentioned later at the appropriate places. The primary concepts relevant to the study of internal migration are "in-migration", "out-migration", "net migration" and "gross migration". Before explaining these terms a distinction is made between "internal migration" and "international migration".

#### **Internal Migration**

Like many other concepts in demography, numerous complexities arise in attempting an exact definition of internal migration. According to Thomas (1938, p. 4), "the accepted definition of internal migration is a change of residence from one community, or other clearly defined geographical unit, to another within the national boundaries". Sociologically, migration is defined as a change in one's community membership, involving not only a change in the usual place of residence but also significant changes in community ties and conditions of life. This definition based on the change of place of residence is not very satisfactory for people who do not have any fixed place of residence (e.g., vagabonds or certain classes of casual labour). Neither does change of residence always involve migration in the way the definition is normally applied because of the difficulty of separating local movers from migrants satisfactorily for all purposes. Movements from one house to another in the same neighbourhood, from one section of a city to another section of the

same city, or from a city to one of its suburbs, fall in the category of local movers. In order to take care of such situations and to distinguish between local movers and migrants, a "boundary definition of migration", i.e., crossing a defined boundary in changing residence, is often used in collecting migration data through a census (Bogue, 1964, p. 285). As a result of the use of this boundary definition normally adopted in the censuses, it is possible to get different types of migration, such as inter-regional, interprovincial, intraprovincial, inter-urban and rural-urban migration. A major problem of this definition is that boundary changes over a period of time affect the comparability of the data. Although change of usual place of residence is the basis used for defining migration in this study, the measurement of migration varies according to the nature of the data. The precise definition in each case has been treated along with the discussion of the data.

### **International or External Migration**

International or external migration refers to movements between Canada and other countries during the migration interval stipulated.

### **In-migration**

In-migration is defined as the number of persons who move into a migration area or areas from elsewhere in the country during a migration interval. A distinction should be made here between in-migrants and immigrants; those who migrate to Canada from other countries are referred to as immigrants.

### **Out-migration**

The number of persons who leave a migration area or areas and enter other migration areas within the country during the migration interval is defined as out-migration; those who migrate from Canada to other countries are referred to as emigrants.

### **Net Migration**

Net migration to or from an area is the number of in-migrants minus the number of out-migrants. A plus sign denotes a net migration gain and a minus sign denotes a net migration loss, referred to as net in-migration and net out-migration, respectively. The number of immigrants minus the number of emigrants is referred to as net external migration.

### **Gross Migration**

The number of migrants entering an area plus the number of migrants leaving it, i.e., in-migration plus out-migration, is defined as gross migration and is also termed "population turnover" (Shryock, 1964, p. 285).

**Origin and Destination of Migrants**

The area from which migrants leave is referred to as area of origin and the area into which migrants enter is called area of destination.

**Migration Interval**

In discussing migration statistics, it is necessary to specify the interval of time, or migration interval, to which they relate. The interval may be one year, five years or ten years, depending on the time period specified in collecting the data, or the time period for which migration is estimated.

**Migration Stream**

"A migration stream is that body of migrants which departs from any one area of origin and arrives at a common area of destination during a migration interval" (Bogue, Shryock and Hoerman, 1957, p. 5). Thus, a group of migrants with similar origin and destination characteristics within a migration interval is referred to as a stream of migrants. For example, migration from Ontario to Quebec and vice versa, or from rural to urban areas, is referred to as a migration stream.

**Life-time In-migration, Life-time Out-migration and Life-time Net Migration**

In this study three measures of migration are obtained from province-of-birth and province-of-residence data. Persons enumerated in a given province at a particular census and born outside the province of enumeration but within the country, irrespective of the time of in-migration, are referred to as life-time in-migrants. The life-time out-migrants are persons enumerated in a census as born in a given province and enumerated outside the province but within the country, irrespective of the time of out-migration. The difference between life-time in-migrants and life-time out-migrants is life-time net migration.

**Migration Rate**

The migration measures previously discussed are sometimes referred to as rates, sometimes as ratios. There seems to be no consensus among migration analysts concerning the appropriateness of using the terms rates or ratios. In this study the term "rate" is applied when the amount of migration is divided by the population exposed to the likelihood (risk) of migrating. The term "rate" may be justified in the sense that the measure indicates the rate at which events in the numerator are occurring among elements in the denominator. Migration researchers have suggested different ways of calculating a rate of migration by varying the base population (denominator). In fact, no one population base is entirely satisfactory. One of the most comprehensive examinations on this subject is by Hamilton (1965) who observed that "the kinds of rates needed are

dependent upon the kinds of migration data used, on the objectives of analysis, and on such practical matters as convenience or ease of calculation, customary practice, and popular understanding of what migration rate means". Thomlinson (1962), after considering seven possibilities, suggested as base population either the population at the second census 'n' years of age and older minus all in-migrants plus those out-migrants who resided in the area initially (if adequate data are available), or the population at the second census 'n' years of age and older minus one half of the net migration (if the former is not possible). Because of the difficulty of obtaining either one of the suggested base populations in many situations, the average population of the period has been used as the base population in many migration studies. Unless otherwise specified, the intercensal net migration rates used in the present study are calculated by dividing the net migration by the average population of two successive censuses of the areas concerned, and multiplying by 100 or 1,000. Hamilton (1965, p. 442) also recommended such an average population as a "common sense, practical base to use for either in- or out-migration and even for net migration". In the case of the life-time migration, rates are calculated on the basis of the enumerated population of the year concerned. Migration rates for 1956-1961 are calculated using the 1961 sample population as the base.

## 2.2 DATA USED AND THEIR EVALUATION

As for most of the studies of internal migration, population censuses are the main sources of data used for the present study. More specifically, the principal bodies of statistics of which use has been made are: (1) statistics of interprovincial migration classified by duration of residence in the 1941 Census; (2) sample migration data in the 1961 Census for 1956-1961; (3) place-of-birth-by-residence data from each of the decennial censuses; and (4) the age and sex data for the native-born and foreign-born populations. Migration estimates can be obtained directly from the first two sources but estimates must be made by indirect estimation procedures from the last two sources. The estimation procedures are described in Chapter Three.

**2.2.1 MIGRATION DATA IN THE 1941 CENSUS** - The first year in the census history of Canada that migration data were collected was 1941. Two questions on migration asked in the 1941 Census were: (1) State the number of years of continuous residence in (a) the same province, (b) the same municipality. (2) State the province or the country of last permanent residence. Also, the enumerator was instructed to ascertain and indicate whether the previous residence was on a farm, in a rural non-farm area or in an incorporated city, town or village. Answers to these questions provided the

basis of migration data tabulated (Census of Canada, 1941, Vol. I, General Review, p. 43).

All the migration data collected in 1941 were not tabulated. As stated in the 1941 Census Review (p. 43), inconsistency in the interpretation placed by respondents on the expression "municipality" was of such proportions as to render it inadvisable to compile the answers received to the second part of the first inquiry. The Census of 1941, therefore, provides no information regarding the extent of intraprovincial migration. Thus, only those who lived outside of their province of residence in 1941 (excluding persons in the armed forces) for a continuous period of one year or more were considered as migrants. The data represented migration of the Canadian-born and foreign-born populations and were tabulated by the duration of stay of migrants in each province: under 2 years, 2-4 years, 5-9 years, 10-14 years, 15-19 years, 20-24 years, and 25 years and over. Of these, only the 10-year interprovincial migration data are used in the present study.

**2.2.2 MIGRATION DATA IN THE 1961 CENSUS**<sup>1</sup> - Detailed migration data relating to the period 1956-1961 were collected in the 1961 Census on a 20-per-cent sample basis for persons aged five years and over in 1961 and residing in private households for Canada, the provinces and territories (complete enumeration for the territories).<sup>2</sup> The data include information on sex, age and type of residence in 1961 for non-movers, and for movers by type of movement. Internal migrants are further classified by type of residence in 1956, and foreign-born migrants who came to reside in Canada after June 1, 1956 are classified by country of birth. Some data on interprovincial migration are available for Canadian born and for foreign born (i.e., those foreign born who came to Canada before June 1, 1956).

A migrant was arbitrarily defined as a person who changed his dwelling unit between June 1, 1956 and June 1, 1961 (omitting multiple moves and movers who had returned to their 1956 place of residence prior to June 1, 1961). The data, therefore, refer to "five-year mobility" and do not give the total migration but only the survivors of migrants in 1961 who moved during the 1956-1961 migration interval. Thus, the data do not directly reflect the mobility of persons who died or left Canada between June 1, 1956 and June 1, 1961 and included only a single move by persons who moved more than once. Further, since the migration questions were addressed to persons aged 15 years and over at the time of taking the 1961 Census, the mobility status of persons under age 15 was arbitrarily obtained. The mobility status of the population 5-14 years of age was assigned as follows: for family members, the family status of the head of the family was assigned; for non-family members, the mobility status of the head of the household was assigned. Thus, the procedure adopted in defining mobility status had

two limitations: (1) it did not provide migration data for the population under five years of age in 1961 and (2) the mobility status of the population 5-14 years of age in 1961 was arbitrarily assigned.

A more serious limitation of the data was probably that it excluded the population in collective-type households such as institutions, hotels and lodging-houses, persons enumerated as temporary residents who were not reported at their usual place of residence elsewhere in Canada, overseas military and government personnel and their families, and persons located after the regular census through postal check of re-enumeration.<sup>3</sup> The missed groups may have been more migratory than the remainder of the population, thus creating certain built-in biases in the data.

Another limitation of the migration data was the sizable number of "not stated" categories, of which there were three types: (1) those who did not indicate their migratory status among the total sample population; (2) those movers within Canada who reported that they had moved but who did not report their place of residence in 1956; and (3) those movers in Canada who reported that they had moved from a rural area but who did not report whether their place of residence in 1956 was rural farm or rural non-farm.

The first type of not stated category formed about six per cent of the total sample population of Canada but its distribution fluctuated markedly among the provinces (Table 2.1). For both sexes, the proportion of population accounted for by this not stated category varied from 3.3 per cent in Saskatchewan to 12.2 per cent in New Brunswick. In fact, for Canada as a whole, the number of persons in the not stated category was more than the total number of interprovincial migrants.

The age distribution of persons in the not stated category showed that the most mobile age groups had the highest percentages of the not stated (over six per cent for the age groups 15-19, 20-24 and 25-29). The percentages varied from 3.9 for those aged 10-14 years to 9.8 per cent for those aged 20-24 years. In all of the published and many of the unpublished migration tables, those who did not state their mobility status were distributed prorata.

The second category of not stated, i.e., movers within Canada who reported that they had moved but who did not report their residence in 1956, formed only about 0.4 per cent of the total movers within Canada. Unlike those in the first category, the number not stated in the second category were not distributed but were given separately in many of the tables.

A quite substantial number of movers did not specify whether their residence in 1956 was a rural area or not; they comprised 11.2 per cent of the total interprovincial and intraprovincial rural movers and 10.7 per

cent and 11.3 per cent, respectively, of the interprovincial and intraprovincial categories. Because of these high percentages, the "not stated" residence movers were distributed on a prorata basis for the analysis of rural-urban migration streams in the present study (Chapter Six).

**Table 2.1 – Percentage Distribution, by Sex and Province, of the Total Sample Population Whose Mobility Status Was Not Stated**  
(1961 Census Migration Data)

Province of residence in 1961	Male	Female	Total
Newfoundland .....	3.3	3.6	3.5
Prince Edward Island .....	5.5	6.0	5.8
Nova Scotia .....	6.5	6.6	6.6
New Brunswick .....	12.1	12.5	12.2
Quebec .....	4.8	4.8	4.8
Ontario .....	7.0	7.3	7.1
Manitoba .....	3.5	3.6	3.6
Saskatchewan .....	3.3	3.3	3.3
Alberta .....	4.0	4.1	4.0
British Columbia .....	5.5	5.4	5.4
Yukon and Northwest Terri- tories .....	4.3	5.6	4.9
<b>Canada .....</b>	<b>5.7</b>	<b>5.9</b>	<b>5.8</b>

SOURCE: Computed from 1961 Census unpublished basic migration tabulations, Table I.

In addition to the previously mentioned biases in the migration data, there is also the possibility of sampling error. No estimate of sampling error of the 1961 migration data is available but it is probable that use of the ratio estimates based on separate weights for the sub-groups of the total population, rather than on a uniform weight, has reduced the sampling error in the data.<sup>4</sup> Estimates are available of the standard errors for migration data collected on a 25-per-cent sample of the population of the United States in 1960. Although there was a five-per-cent difference between the Canadian and United States sampling fractions, the findings based on the United States data may give some idea about the magnitude of sampling error in the Canadian migration data. The relevant data are presented in Tables 2.2 and 2.3.

According to the estimates in Tables 2.2 and 2.3, "the chances are about 2 out of 3 that the difference due to sampling variability between an estimate and the figure that would have been obtained from a complete

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count of the population is less than the standard error. The chances are about 19 out of 20 that the difference is less than twice the standard error and about 99 out of 100 that it is less than 2½ times the standard error" (United States Census of Population, 1960, PC(2)-2B, p. xxii). Table 2.2 provides factors by which the standard errors shown in Table 2.3 should be multiplied to adjust for the combined effect of the sample design and the estimation procedure. The multiplication of the relevant factors in Table 2.2 with the standard error given for the size of the estimates in Table 2.3 will yield the approximate standard error.

All the sources of error noted above should be kept in mind in interpreting the results of this publication. The seriousness of the various types of error, particularly sampling error, will be greater for smaller numbers than for larger numbers.

**Table 2.2 – Factors to be Applied to Standard Errors**  
(1960 United States Migration Data)

Characteristic	Factor
Place of residence, 1960 .....	0.8
By place of residence, 1955 .....	1.2
By mobility status .....	1.2
Mobility status .....	1.6
By age, sex, and color .....	1.6
By year moved into present house .....	1.6
By all other characteristics .....	1.2

**Table 2.3 – Rough Approximation to Standard Error of Estimated Number**  
(1960 United States Migration Data)

(Range of 2 chances out of 3)

Estimated number	Standard error	Estimated number	Standard error
50 .....	15	5,000 .....	110
100 .....	20	10,000 .....	160
250 .....	30	15,000 .....	190
500 .....	40	25,000 .....	250
1,000 .....	50	50,000 .....	350
2,500 .....	80		

SOURCES: U.S. Census of Population 1960: *Mobility for Metropolitan Areas*, Final Report PC (2) - 2C, U.S. Government Printing Office, Washington, D.C., 1963, p. xvi.

**2.2.3 PLACE OF BIRTH BY RESIDENCE DATA** – As already noted, very little material is readily available for a historical analysis of migration in Canada. With the exception of the 1941 Census for Canada and the 1946 Census for the Prairie Provinces,<sup>5</sup> no direct information on migration was collected before 1961. However, data that can be used for historical analysis are the migration estimates based on place-of-birth and place-of-residence data in the censuses. Maximum use of place-of-birth data can be made only if the data are tabulated by age and sex, and are available for two or more successive censuses and Canada, unlike many other countries, has available, through each of its decennial censuses from 1931 to 1961, the required type of data for each province. In this study these place-of-birth data have been used for the first time to the fullest extent possible to derive interprovincial net migration estimates of the Canadian-born population by age and sex for each decade. The methodology and the type of estimates derived from the province-of-birth data are described in Chapter Three.

**2.2.4 AGE AND SEX OF THE CANADIAN-BORN AND FOREIGN-BORN POPULATIONS** – Intercensal net migration estimates may be derived from census age-sex distributions by applying the census survival ratio method (see Chapter Three for an explanation of the method). For the foreign-born population, interprovincial net migration estimates have been prepared in the present study for 1931-1941, 1941-1951 and 1951-1961; for the Canadian-born population, estimates have been made for 1951-1961 mainly for comparative purposes.

One of the major requirements for reliable migration estimates by the survival ratio method is consistency in the net enumeration errors in the successive censuses, including age reporting. No attempt has been made in this study to evaluate the quality of age-sex distribution of the Canadian censuses, nor has a comprehensive investigation on this aspect been made in any other study using census data. However, data on the completeness of enumeration is available for the 1951 and 1961 Censuses which give some idea about the extent and pattern of underenumeration. The relevant data are presented in Table 2.4.

The data in Table 2.4 for 1951 and 1961 are not strictly comparable. The data for 1951 are the percentage of persons enumerated in the Labour Force Survey but not matched in the 1951 Census. They reflect not only the underenumeration of population but also the movement of persons between the times of actual enumeration, as well as the misfiling of cards or the late filing of cards for persons away from their usual residence.<sup>6</sup> Thus, the 1951 percentages may be taken as exaggerated indicators of underenumeration. The 1961 data are based on the final results of Project III of the quality analysis of the 1961 Census of Population (Fellegi, 1968).

Assuming that the data in Table 2.4 are fairly reliable, they indicate that underenumeration in 1961 was higher than in 1951. Because the 1951 estimates are probably inflated, it may be safe to say that, from 1951 to 1961, census underenumeration increased by at least 0.7 percentage points – from 2.6 per cent to 3.3 per cent. The effect of the differential underenumeration should be considered when interpreting the net migration estimates derived from residual methods for the period 1951-1961. No such estimates of underenumeration are available for the censuses prior to 1951.

**Table 2.4 – Percentage Underenumeration of Persons, by Age in the 1951 Census and by Age and Region in the 1961 Census**

1951 Census		1961 Census			
Age group	Per cent	Age group	Per cent	Region	Per cent
Under 14 .....	1.2	5-14 .....	2.1	Atlantic .....	5.2
14-19 .....	4.6	15-34 .....	6.0	Quebec .....	2.1
20-24 .....	6.4	35-54 .....	1.5	Ontario .....	3.0
25-34 .....	3.2	55+ .....	3.0	Prairies .....	4.1
35-44 .....	2.0			British Columbia ....	4.1
45-54 .....	2.1				
55-64 .....	2.1				
65 and over ....	2.9				
All ages ....	2.6	All ages ....	3.3	Canada .....	3.3

SOURCES: 1951 Census, Vol. XI, p. 92; 1961 Census, I.P. Fellegi, "Coverage Check of the 1961 Census of Population", *Technical Memorandum (Census Evaluation Series) No. 2*, Census Division, DBS (Ottawa, March 1968), Tables 3.1 and 3.2.

## FOOTNOTES TO CHAPTER TWO

<sup>1</sup> A more detailed review of the population sample and of the quality of the 1961 migration data is contained in Stone, 1969, Appendix B.

<sup>2</sup> Three questions on migration were asked in the 1961 Census: (1) Did you live in this dwelling five years ago, on June 1, 1956? (2) In what city, town, village or municipality did you live? (3) Was this dwelling on a farm or small agricultural holding (one acre and \$50 sales)?

<sup>3</sup> For more details of the population excluded from the migration sample and the reconciliation of the sample data, see Sylvia T. Wargon, "Reconciliations and Adjustment of the 1961 Sample Migration Data", *Technical Memorandum (General Series) No. 22*, DBS, Census Division (Ottawa: September 1968).

<sup>4</sup> For more details of the weighting procedure, see *ibid*: p. 11.

<sup>5</sup> The migration data collected in the Census of the Prairie Provinces (Manitoba, Saskatchewan and Alberta) in 1946 were for the period 1941-1946. Each person five years of age and over was asked where he or she resided on June 1, 1941. The answers to this question provided the data on the movements of population by (1) geographic region, and (2) type of locality of residence, i.e., farm, rural non-farm, and urban. One principal limitation of the data collected was that the data were applicable only to the measurement of inward movements to the Prairie Provinces, intraprovincial migration, and interprovincial migration within the limits of the three provinces. The outward movements of population from the Prairies to other provinces could not be obtained (see Census of the Prairie Provinces, 1946, Vol. 1, Tables 48-60).

<sup>6</sup> For further details of the investigation of underenumeration in 1951, see 1951 Census, Vol. XI, *Administrative Report*, pp. 91-93.



## ***Chapter Three***

# **ESTIMATION OF INTERNAL MIGRATION**

No one body of data can give a reasonably complete picture of internal migration in Canada. Four principal sources of data available for the analysis of internal migration are reviewed in the previous chapter, all of which are used by employing suitable methods of deriving migration measures from them. The methods employed and the problems encountered in estimating migration are described in the present chapter.

### **3.1 MIGRATION ESTIMATES FROM DATA ON PLACE OF BIRTH BY RESIDENCE**

As stated in Chapter Two, place-of-birth data by age and sex are available in each of Canada's decennial censuses from 1931 to 1961, which permit the calculation of meaningful intercensal net migration estimates by age and sex for the provinces and regions.<sup>1</sup>

**3.1.1 BASIC MEASURES OF MIGRATION FROM PLACE-OF-BIRTH DATA** - The basic measures of migration from place-of-birth data and the superiority of migration estimates from place-of-birth data over estimates by census survival ratio method are discussed in a number of studies and need not be repeated in detail (Lee, 1957, pp. 57-64; Zachariah, 1964, C. III; Bogue, 1955; Eldridge, 1965a, C. V). Replies to the place-of-birth question divides the population into two major components - those enumerated in the place of birth (non-migrants) and those enumerated outside the place of birth (migrants). From these data it is possible to estimate the migration flows into and out of provinces or other spatial units, depending on how the data are collected and tabulated. In terms of place-of-birth data available for Canada, for example, a person is a migrant if he is enumerated in a province other than his province of birth. Thus, within the limitations of that definition, the following migration measures can be derived:<sup>2</sup> (1) the life-time in-migrants to the province (I); (2) the life-time out-migrants from the province (O); (3) the life-time net migration in the province or birth residence index<sup>3</sup> ( $M = I - O$ ).

The above migration indices, in-, out- and net migration, however, do not refer to any specified time period. These are life-time migration indices, which represent the survivors of persons who have migrated out of the province of birth and the return migrants, i.e., those returned to the province of birth from the province of residence at any time since they were born. Thus, the place-of-birth data relate to the surviving life-time migrants and not to gross migration and they refer to the date of the census and not to any specific period preceding the census. However, the life-time migration indices are excellent measures of the extent of the net result of the over-all mobility of the population, although they do not give any idea about current or recent migration. A partial solution of this problem is the estimation of intercensal net migration.

The usual procedure in estimating intercensal net migration is to subtract the place-of-birth information for the earlier census from that for the later census. Thus, for example, if  $I_1$ ,  $O_1$  and  $M_1$  are the in-, out- and net life-time migrants, respectively, at the first census in province A, and  $I_2$ ,  $O_2$ , and  $M_2$  are the corresponding life-time migrants in the second census, the difference  $(I_2 - O_2) - (I_1 - O_1)$  or  $M_2 - M_1$  may be taken as an estimate of net migration ( $M$ ) for A during the intercensal period. There are two components of net migration in this estimate which can be separated: (1) the intercensal net migration among persons born outside the province ( $I_2 - I_1$ ), and (2) the intercensal net migration among persons born in the province concerned ( $O_2 - O_1$ ). The difference between these two components also gives the intercensal net migration. Thus,  $M = (I_2 - I_1) - (O_2 - O_1)$ .

The above method for estimating intercensal net migration is subject to errors in the basic data, and errors caused by mortality, return migration, and multiple movements (the term "errors" in this context refers to the extent to which the differencing procedure fails to estimate intercensal net migration from place-of-birth statistics). In the case of migration between a province and two or more other provinces, there is an additional shortcoming because of the failure to identify the circular movements. For example, if a person born in province A moves to province B and then to C during an intercensal period, he will appear as a case of direct movement from province A to province C, and thus fails to identify the movement from province B to C.

Examination of the various types of errors in estimating intercensal migration by the differencing procedure in other studies has shown that the most serious error associated with the use of this method is caused by mortality (Lee, 1957, pp. 57-64; Zachariah, 1964, C. III; George, 1965, C. III; Shryock, Jr., 1964, Appendix A). The studies cited assume that the population is not affected by external migration of the natives but this is not true for Canada; substantial migration of natives takes place between

Canada and the United States for which special adjustments of native population are required.

All those among the  $I_1$  and  $O_1$  groups who die during the intercensal interval will appear as "fresh migrants" if estimates are made without mortality corrections. The data required for refined mortality correction are the place-of-birth data tabulated by age and sex for successive censuses and appropriate age-specific survival ratios. The existing estimates of internal migration in Canada using place-of-birth data are made without correcting for mortality; it appears that the analysts either did not consider the correction worth the effort or are unaware of the fact that place-of-birth data by age are available for Canada for refined mortality corrections.<sup>4</sup>

**3.1.2 PROCEDURES USED FOR ESTIMATING INTERCENSAL NET MIGRATION** - The data required for fairly refined mortality corrections are the place-of-birth data by residence cross-classified by age and sex for successive censuses and appropriate age-specific survival ratios. The birth-residence data cross-classified by age and sex are readily available for each of the provinces of Canada in the decennial censuses since 1931 (Chapter Two). Assuming that the native-born population is reasonably "closed" (i.e., not affected by international migration), it is possible to calculate provincial intercensal age-specific census survival ratios for the population born in a province (in-born),<sup>5</sup> including both those living in the province and those living elsewhere at each census date. By applying such survival ratios to the population born in a province and residing there and in each of the other provinces in the first census, expected numbers of this population for the second census can be obtained. The differences between the expected numbers and the corresponding numbers enumerated in the second census are estimates of net change due to the intercensal migration of the population born in each province with reference to each of the 11 provinces (as of the 1951-1961 period). By repeating this operation for each province, net change due to migration of in-born population of each province can be estimated for that province and each of the other 10 provinces (11 matrices altogether). From these can be accumulated, for each province, the intercensal net migration of population born in each province, which is usually net out-migration, and the net migration of population born outside the province (out-born), which is usually net in-migration. The sum of these two represents the net migration for the province (see the Appendix for detailed explanation of the procedure).<sup>6</sup>

**3.1.3 ADJUSTMENTS FOR PLACE OF BIRTH, AGE NOT STATED AND OPEN NATURE OF THE POPULATION** - Before using the place-of-birth data for estimating migration, it was necessary to make adjustments for (1) persons who did not state their place of birth and (2) persons who did not state their ages. The numbers of persons in both categories for Canada were

7,912 in 1931 and 3,002 in 1941, representing 0.10 per cent and 0.04 per cent, respectively, of the Canadian-born population; in 1951 and 1961, the not stated categories were distributed by the Census Division before publication of the data. Although the numbers of the not stated categories in 1931 and 1941 were small, it was decided to distribute them in accordance with the age-sex distributions of those whose place of birth was reported in each province in order to get comparable data. In this distribution it was assumed that all those who did not report their place of birth were born outside the province of residence.

As mentioned earlier, a "closed" population is a condition for calculating the survival ratios of the in-born by age and sex for each province. Because the place-of-birth method is used only to estimate the intercensal net migration of the Canadian born, only emigration of this group violates the assumption of a closed population. There is no record of emigrants, whether Canadian born or foreign born, from Canada but enough evidence exists to show that most Canadian-born emigrants went to the United States. According to the United Nations *Demographic Yearbook*, of the total number of Canadian-born emigrants enumerated in other countries in the 1960s, about 93 per cent were in the United States.<sup>7</sup> It was therefore assumed that the native-born population enumerated in Canada and the United States together would make a reasonably closed population for the purpose here and, on this assumption, the numbers of the Canadian-born persons enumerated in the United States censuses of 1930, 1940, 1950 and 1960 were added to the corresponding numbers enumerated in Canada in 1931, 1941, 1951 and 1961, respectively. Because there is a difference of 11 months between the United States census date and Canadian census date, figures of the Canadian born enumerated in the United States and Canadian censuses do not take into account the flows of the Canadian born between the two countries, and their deaths during the 11 months at both ends of the intercensal intervals. No special adjustment of the data has been made for the possible double counting and/or undercounting arising from this difference of 11 months. Because the flows between the United States and Canada are in both directions and the number involved is likely to be small, it is reasonable to assume that errors in the data arising from this source cancel out to a considerable extent.

Another problem was that, except in 1950, the Canadian-born population enumerated in United States censuses was not tabulated in five-year age groups. Only total population by sex was available for 1940, and for 1930 and 1960 the distributions were in varying age groups (five-year, 10-year, 15-year and 20-year groups).<sup>8</sup> Hence, the conventional five-year age data required here had to be estimated, and the most difficult task in this

regard was to distribute the 1941 data by age groups. After trying several methods, it was decided to distribute the given population distributions in 1930, 1940 and 1960 into five-year age groups (without affecting the numbers in given age groups) on the basis of the age distributions of the foreign-born population enumerated in Canada in 1931, 1941 and 1961, respectively.<sup>9</sup> The given age distributions of the Canadian born in the United States in 1950 and 1960 were strikingly similar to the corresponding distributions of the foreign born enumerated in Canada. Keyfitz (1950, p. 58) also observed such similarity for the years 1910 and 1930 and used the same procedure in his study. The Canadian-born population by age and sex enumerated in the various United States censuses are given in Table 3.1. The proportion of the Canadian-born persons enumerated in the United States to the total Canadian-born population was 29.4 per cent in 1930, 9.9 per cent in 1940, 7.7 per cent in 1950 and 5.8 per cent in 1960.

In the United States censuses, the Canadian born were not given by province of origin, which created the problem of thus distributing them. However, except in 1960, Canadian-born persons living in the United States were classified as being of French or non-French origin, which helped to make possible fairly reasonable proportional distributions (Table 3.2). The people of French origin in Canada are concentrated in Quebec, Ontario and New Brunswick, in which provinces the percentage distributions in 1961 were 76.8, 11.6 and 4.2, respectively (1961 Census, Vol. I, Part 3, Tables 114 and 115). Hence, separate distributions of Canadian-born people of French and non-French origins were made only for these three provinces, calculated as follows: (1) population of French origin by age and sex in the United States in each census was distributed according to the corresponding ratio of the population of French origin in Quebec, Ontario and New Brunswick to the total population of French origin in Canada; (2) the remaining portion of population of French origin was merged with the population of non-French origin living in the United States and distributed according to the ratios of population of non-French in each province (assuming the total population as being non-French in all the provinces except the three mentioned) to the total non-French in Canada; and (3) the separate totals of French and non-French origins estimated for Quebec, Ontario and New Brunswick were combined to obtain the total distribution of the Canadian born in each of them.<sup>10</sup>

The estimated age-sex distributions of Canadian born enumerated in the United States censuses, by province of origin, were finally added to the corresponding Canadian-born populations of each province. The resulting totals for each gave a reasonably closed population of native born for each province in 1931, 1941, 1951 and 1961.

Table 3.1 - Canadian-born Population, by Age Group and Sex, Enumerated in United States Censuses, 1930, 1940, 1950 and 1960

NOTE: - Except for 1950, the age distributions are estimated as explained in the text.

Age group	1930		1940		1950		1960	
	Male	Female	Male	Female	Male	Female	Male	Female
	No.	No.	No.	No.	No.	No.	No.	No.
0 - 4 .....	7,050	7,181	837	559	3,355	3,515	4,734	4,750
5 - 9 .....	19,171	19,453	2,026	1,397	5,335	5,005	11,367	11,120
10 - 14 .....	21,468	21,477	4,235	4,051	4,140	4,655	17,101	16,534
15 - 19 .....	23,555	26,812	14,025	16,624	6,375	7,200	10,459	12,784
20 - 24 .....	47,771	55,608	20,017	25,705	12,625	17,465	11,932	16,520
25 - 29 .....	48,354	52,447	24,835	34,785	26,955	37,600	15,851	26,136
30 - 34 .....	48,311	55,129	36,700	51,689	34,905	46,165	19,960	32,558
35 - 39 .....	49,521	56,948	50,240	55,182	40,450	54,355	41,401	55,895
40 - 44 .....	51,940	53,309	51,999	53,507	41,670	54,480	30,060	38,594
45 - 49 .....	79,236	80,969	44,127	53,786	46,055	51,110	34,754	45,305
50 - 54 .....	60,216	63,010	47,490	53,646	41,510	48,635	44,596	58,864
55 - 59 .....	39,935	42,442	47,075	51,831	35,465	44,895	41,908	47,921
60 - 64 .....	29,128	32,157	45,801	52,808	35,860	43,980	36,396	44,711
65 - 69 .....	40,152	38,638	36,412	41,353	33,510	45,335	28,303	40,404
70 + .....	51,282	55,751	59,488	61,890	68,000	89,480	60,354	91,234
All ages .....	617,090	661,331	485,307	558,813	436,210	553,875	409,176	543,330

SOURCES: 1930 - U.S. Census 1930, *Population*, Vol. 2, General Report, Statistics by Subjects, Table 40; 1940 - U.S. Census 1940, *Population, Nativity and Parentage of the White Population, Country of Origin of the Foreign Stock*, Table 3. 1950 - U.S. Census 1950, *Population, Nativity and Parentage*, P.-E. No. 3A, Table 14. The figures by age and sex in this table were based on a 20-per-cent sample. In Table 12 of the same volume, total Canadian born were given as 238,409 French and 756,153 non-French. No adjustment was made for this discrepancy between Tables 12 and 14. 1960 - U.S. Census 1960, *Population, Nativity and Parentage*, PC(2) - 1A, Table 9.

**Table 3.2 – Distribution, by French and Non-French Origins, of  
Canadian-born Population Enumerated in  
United States Censuses, 1930, 1940, 1950 and 1960**

Origin and sex	1930 <sup>a</sup>	1940 <sup>a</sup>	1950	1960 <sup>b</sup>
	No.	No.	No.	No.
<b>French –</b>				
Males .....	187,523	133,576	111,435	96,483
Females .....	183,329	139,790	126,485	112,252
<b>Totals, French .....</b>	<b>370,852</b>	<b>273,366</b>	<b>237,920</b>	<b>208,735</b>
<b>Non-French –</b>				
Males .....	429,567	351,731	324,775	312,693
Females .....	478,002	419,023	427,390	431,078
<b>Totals, non-French .....</b>	<b>907,569</b>	<b>770,754</b>	<b>752,165</b>	<b>743,771</b>
<b>All Canodions –</b>				
Males .....	617,090	485,307	436,210	409,176
Females .....	661,331	558,813	553,875	543,330
<b>Totals, oll Canodions .....</b>	<b>1,278,421</b>	<b>1,044,120</b>	<b>990,085</b>	<b>952,506</b>

<sup>a</sup> Excludes Newfoundland.

<sup>b</sup> The Canadian-born population in the United States in 1960 was not available by French and non-French origins. Hence, the French and non-French distributions were estimated as follows: first, the rate of change in the ratios of people of French origin from Canada in the United States between 1940 and 1950 was calculated; second, using this rate of change, the expected populations of French and non-French origins in 1960 were estimated; third, the distribution of expected population by French and non-French origins in 1960 was applied to the total Canadian born in the United States in 1960, thus obtaining the French and non-French populations.

SOURCES: Same as Table 3.1.

**Table 3.3 – Ten-year Place-of-Birth Survival Ratios for the Provinces and Territories, by Sex and Age Group, 1931 - 1941, 1941 - 1951 and 1951 - 1961**

No.	Sex and age group	P.E.I.	N.S.	N.B.	Que.
		1931 - 1941			
<b>Males</b>					
1	0- 4 to 10-14 .....	1.010564	1.016689	1.004860	1.021816
2	5- 9 " 15-19 .....	0.986224	0.961206	0.973762	0.979503
3	10-14 " 20-24 .....	0.978770	0.951671	0.953033	0.926764
4	15-19 " 25-29 .....	0.939247	0.938705	0.915849	0.933723
5	20-24 " 30-34 .....	0.926261	0.933769	0.934083	0.923743
6	25-29 " 35-39 .....	1.046265	1.060826	1.048438	0.994809
7	30-34 " 40-44 .....	1.020112	1.039181	1.020728	0.965263
8	35-39 " 45-49 .....	0.988244	0.995736	0.981139	0.965704
9	40-44 " 50-54 .....	0.977494	0.979007	0.972023	0.937127
10	45-49 " 55-59 .....	0.833451	0.810583	0.813716	0.797130
11	50-54 " 60-64 .....	0.824884	0.794889	0.777484	0.763091
12	55-59 " 65-69 .....	0.798379	0.817028	0.818804	0.765690
13	60+ " 70+ .....	0.461212	0.450031	0.443388	0.422497
<b>Females</b>					
14	0- 4 to 10-14 .....	1.043040	1.020153	1.015702	1.023531
15	5- 9 " 15-19 .....	0.987368	0.974010	0.988073	0.992153
16	10-14 " 20-24 .....	0.959642	0.937411	0.943062	0.970848
17	15-19 " 25-29 .....	0.917403	0.931377	0.894766	0.919001
18	20-24 " 30-34 .....	0.869736	0.915918	0.903227	0.901992
19	25-29 " 35-39 .....	1.025830	1.026397	1.014351	0.963358
20	30-34 " 40-44 .....	1.021896	1.024755	1.004340	0.970367
21	35-39 " 45-49 .....	0.973513	0.979979	0.952475	0.942037
22	40-44 " 50-54 .....	0.981880	0.979218	0.975044	0.939749
23	45-49 " 55-59 .....	0.833155	0.815517	0.807014	0.791843
24	50-54 " 60-64 .....	0.805103	0.799614	0.793726	0.773600
25	55-59 " 65-69 .....	0.858918	0.828629	0.819683	0.782915
26	60+ " 70+ .....	0.490287	0.492918	0.492284	0.462844

**Table 3.3 – Ten-year Place-of-Birth Survival Ratios for the Provinces  
and Territories, by Sex and Age Group, 1931 - 1941,  
1941 - 1951 and 1951 - 1961**

Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.	No.
1931 - 1941						
1.016227	1.012294	1.001293	1.004432	0.980160	0.884892	1
0.967081	0.974497	0.972171	0.972537	0.946222	0.773183	2
0.952801	0.951199	0.939596	0.956108	0.936961	0.784636	3
0.932465	0.932113	0.921541	0.932948	0.909701	0.823718	4
0.936326	0.918606	0.915974	0.940090	0.938880	1.013889	5
1.036949	1.034707	1.046480	1.112634	1.082383	1.148837	6
1.028359	1.041580	1.080439	1.155745	1.128649	0.947891	7
0.992166	1.033637	1.069851	1.193478	1.118313	0.913924	8
0.978221	1.017977	1.088481	1.213970	1.163244	0.861619	9
0.832354	0.798643	0.692802	0.771490	0.814116	0.711370	10
0.794611	0.755519	0.669758	0.760346	0.787338	0.737542	11
0.797575	0.761960	0.675713	0.766064	0.792834	0.796703	12
0.464949	0.339021	0.290458	0.331931	0.373727	0.397647	13
1.024070	1.018657	1.005333	1.017050	0.985776	0.972149	14
0.984659	0.990122	0.980892	0.986710	0.965706	0.733900	15
0.970137	0.966875	0.957800	0.967353	0.963078	0.832025	16
0.943684	0.922296	0.917971	0.934281	0.937637	0.801292	17
0.932721	0.905718	0.917363	0.943168	0.935583	0.954459	18
1.023026	1.018618	1.058377	1.122997	1.134008	0.960000	19
1.023164	1.043916	1.106225	1.205081	1.177298	0.932243	20
0.975018	1.011332	1.069349	1.197965	1.141499	0.876344	21
0.982030	1.041220	1.118822	1.261310	1.230437	0.841945	22
0.830860	0.803373	0.683534	0.758587	0.830903	0.727011	23
0.816545	0.753343	0.655108	0.749366	0.808894	0.900826	24
0.839860	0.756908	0.694696	0.791372	0.859868	0.784884	25
0.508785	0.378622	0.330886	0.387377	0.437200	0.492925	26

**Table 3.3 – Ten-year Place-of-Birth Survival Ratios for the Provinces and Territories, by Sex and Age Group, 1931-1941, 1941-1951 and 1951-1961 – continued**

No.	Sex and age group	P.E.I.	N.S.	N.B.	Que.
		1941 - 1951			
Males					
1	0 - 4 to 10-14 .....	1.025547	1.032528	1.018930	1.030415
2	5 - 9 " 15-19 .....	0.960211	0.951637	0.951579	0.967822
3	10-14 " 20-24 .....	0.886473	0.899170	0.884599	0.918687
4	15-19 " 25-29 .....	0.875924	0.918484	0.886535	0.914163
5	20-24 " 30-34 .....	0.881727	0.930313	0.914858	0.972817
6	25-29 " 35-39 .....	0.956447	0.992217	0.991266	0.991966
7	30-34 " 40-44 .....	0.913641	0.961986	0.968302	0.976534
8	35-39 " 45-49 .....	0.879200	0.877050	0.893961	0.917146
9	40-44 " 50-54 .....	0.946593	0.885382	0.906106	0.916814
10	45-49 " 55-59 .....	0.803836	0.791381	0.821664	0.814742
11	50-54 " 60-64 .....	0.779483	0.760112	0.790698	0.791468
12	55-59 " 65-69 .....	0.831216	0.784188	0.777768	0.772398
13	60+ " 70+ .....	0.525182	0.532805	0.529948	0.533423
Females					
14	0 - 4 to 10-14 .....	1.017663	1.031689	1.019766	1.022287
15	5 - 9 " 15-19 .....	0.969691	0.975308	0.971443	0.986546
16	10-14 " 20-24 .....	0.910810	0.957540	0.926390	0.966488
17	15-19 " 25-29 .....	0.927982	0.993153	0.941704	0.954158
18	20-24 " 30-34 .....	0.960113	1.013854	0.978241	0.979613
19	25-29 " 35-39 .....	1.008933	1.027762	1.023020	0.996837
20	30-34 " 40-44 .....	0.982827	0.984205	0.968698	0.970682
21	35-39 " 45-49 .....	0.863586	0.885724	0.898795	0.915291
22	40-44 " 50-54 .....	0.867643	0.888649	0.883964	0.907128
23	45-49 " 55-59 .....	0.816218	0.821379	0.840125	0.854710
24	50-54 " 60-64 .....	0.781142	0.792091	0.808320	0.838994
25	55-59 " 65-69 .....	0.846352	0.850312	0.851135	0.855165
26	60+ " 70+ .....	0.569915	0.586799	0.587529	0.583813

**Table 3.3 – Ten-year Place-of-Birth Survival Ratios for the Provinces and Territories, by Sex and Age Group, 1931 - 1941, 1941 - 1951 and 1951 - 1961 – continued**

Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.	No.
1941 - 1951						
1.033727	1.024015	1.010676	1.013364	1.013151	0.946787	1
0.969238	0.956349	0.944345	0.945038	0.953952	0.948598	2
0.930939	0.909657	0.893047	0.905063	0.923475	0.899729	3
0.935454	0.906634	0.898352	0.917096	0.948336	0.967585	4
0.963592	0.922831	0.937155	0.944940	0.977684	1.073427	5
1.014497	0.976834	0.987452	1.005298	1.051511	0.970817	6
0.974707	0.963866	0.951651	0.997323	1.023817	0.966732	7
0.904047	0.901806	0.839886	0.894878	0.957043	0.931174	8
0.892090	0.875389	0.744050	0.825331	0.926980	0.926702	9
0.808049	0.779540	0.644543	0.704554	0.821651	0.698061	10
0.764736	0.729801	0.568405	0.657326	0.770506	0.803030	11
0.763881	0.740233	0.556972	0.664213	0.801576	0.717213	12
0.525738	0.612163	0.538008	0.680550	0.770615	0.567164	13
1.033461	1.020531	1.012948	1.014578	1.018221	0.964472	14
0.982656	0.973895	0.962129	0.957536	0.966437	0.980975	15
0.971070	0.962066	0.936283	0.933921	0.965305	0.935880	16
0.997674	0.963073	0.949679	0.950716	0.998195	0.980132	17
1.024905	1.000539	0.973086	0.986346	1.054062	1.041509	18
1.052069	1.012024	1.003076	1.038426	1.085075	1.072581	19
0.981267	0.978291	0.946409	0.983364	1.047290	0.942346	20
0.902792	0.888357	0.828692	0.887069	0.942005	0.888158	21
0.887722	0.871291	0.724372	0.806924	0.916348	0.849624	22
0.842301	0.806695	0.673106	0.746603	0.865119	0.806748	23
0.815996	0.787780	0.628139	0.719645	0.870696	0.779783	24
0.850505	0.827241	0.705682	0.861827	1.051960	0.790514	25
0.599207	0.706774	0.627354	0.793429	0.909130	0.633452	26

**Table 3.3 – Ten-year Place-of-Birth Survival Ratios for the Provinces and Territories, by Sex and Age Group, 1931-1941, 1941-1951 and 1951-1961 – concluded**

No.	Sex and age group	Nfld.	P.E.I.	N.S.	N.B.	Que.
		1951-1961				
<b>Males</b>						
1	0- 4 to 10-14 .....	1.038104	1.020195	1.031174	1.008784	1.024312
2	5- 9 " 15-19 .....	0.974525	0.960671	0.971540	0.946293	0.982698
3	10-14 " 20-24 .....	0.932882	0.911427	0.918404	0.889228	0.950750
4	15-19 " 25-29 .....	0.992877	0.967230	0.993928	0.963221	1.002858
5	20-24 " 30-34 .....	1.001573	1.023349	1.028583	1.025245	1.024899
6	25-29 " 35-39 .....	1.034430	1.014775	1.039034	1.031739	1.028958
7	30-34 " 40-44 .....	1.009919	0.983523	0.986053	1.001698	1.020377
8	35-39 " 45-49 .....	0.931742	0.922678	0.920275	0.936181	0.980327
9	40-44 " 50-54 .....	0.967268	0.955669	0.949194	0.944083	0.948312
10	45-49 " 55-59 .....	0.923612	0.894633	0.910100	0.898289	0.879042
11	50-54 " 60-64 .....	0.865292	0.797258	0.834591	0.828307	0.834207
12	55-59 " 65-69 .....	0.815783	0.810933	0.820742	0.805491	0.805708
13	60+ " 70+ .....	0.504886	0.510998	0.508811	0.512185	0.489635
<b>Females</b>						
14	0- 4 to 10-14 .....	1.041238	1.021215	1.027628	1.017440	1.025049
15	5- 9 " 15-19 .....	0.993958	0.970360	0.981211	0.955622	1.001007
16	10-14 " 20-24 .....	0.933606	0.952112	0.967161	0.920332	1.005890
17	15-19 " 25-29 .....	0.947901	0.973846	1.003767	0.960603	1.007323
18	20-24 " 30-34 .....	0.975533	1.007551	1.023946	0.989508	1.011193
19	25-29 " 35-39 .....	1.031204	1.029798	1.033442	1.015605	1.012389
20	30-34 " 40-44 .....	0.973018	0.943554	0.946570	0.962500	1.000177
21	35-39 " 45-49 .....	0.916453	0.898183	0.914556	0.935101	0.964809
22	40-44 " 50-54 .....	0.976525	0.919507	0.946289	0.940956	0.942823
23	45-49 " 55-59 .....	0.925545	0.904838	0.918959	0.897823	0.924874
24	50-54 " 60-64 .....	0.881186	0.843701	0.862257	0.877641	0.872366
25	55-59 " 65-69 .....	0.864893	0.883007	0.866938	0.872898	0.862205
26	60+ " 70+ .....	0.543640	0.580683	0.566545	0.562724	0.536341

SOURCE: Computed as explained in Section 3.1.3.

**Table 3.3 – Ten-year Place-of-Birth Survival Ratios for the Provinces and Territories, by Sex and Age Group, 1931-1941, 1941-1951 and 1951-1961 – concluded**

Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.	No.
1951-1961						
1.030618	1.022597	1.029062	1.048373	1.032245	1.007250	1
0.976702	0.975185	0.976035	0.979622	0.997986	0.878049	2
0.946634	0.923783	0.919747	0.937151	0.975369	0.954401	3
1.011660	0.990182	0.988595	1.008589	1.061222	0.940887	4
1.025640	1.025235	1.039809	1.049996	1.086395	1.016566	5
1.038914	1.028014	1.033541	1.071450	1.111553	1.085427	6
0.984016	0.985944	0.992774	1.008939	1.025934	0.899023	7
0.934380	0.942749	0.946710	0.969905	0.959399	0.955912	8
0.955172	0.960498	0.961185	0.993661	1.025330	0.908907	9
0.911076	0.915673	0.914642	0.996378	1.029088	1.067391	10
0.835415	0.862196	0.862796	0.981977	0.926702	0.974576	11
0.797893	0.825884	0.819380	0.941313	0.907300	0.984127	12
0.490379	0.558511	0.480710	0.546513	0.565562	0.577957	13
1.031055	1.021231	1.027575	1.039576	1.037285	1.004413	14
0.987433	0.984034	0.984676	0.997168	1.000803	0.944154	15
0.995139	0.981670	0.979746	0.982500	1.007011	1.061755	16
1.033406	1.002077	1.006332	1.025435	1.084289	0.992727	17
1.031710	1.003050	1.019646	1.038539	1.073375	1.013120	18
1.048893	1.025856	1.022615	1.070252	1.131287	1.021959	19
0.962182	0.956552	0.976143	0.987405	0.987651	0.847826	20
0.931699	0.931466	0.944601	0.954126	0.958732	0.874060	21
0.977647	0.963404	0.967903	1.038021	1.090025	0.928270	22
0.932277	0.937811	0.920243	1.018365	1.030625	1.009877	23
0.882938	0.895842	0.898051	1.024740	0.989364	0.982301	24
0.872280	0.893422	0.889303	1.032757	1.021303	1.049430	25
0.566805	0.639753	0.545150	0.634953	0.627843	0.628238	26

Using the estimated population born in each province, the intercensal survival ratios of the native born for each province for the periods 1931-1941, 1941-1951 and 1951-1961 were calculated as explained in Section 3.1.2 and are presented in Table 3.3. The survival ratios for five-year age groups should normally increase up to the age group 5-9 and decrease gradually with increasing age. The survival ratios in Table 3.3 not only deviate from this normal pattern but also exceed unity for some age groups. Such deviation from the normal pattern of survival ratios may be due to the separate or combined effect of (1) errors in age reporting, (2) under enumeration or overenumeration, (3) mis-statement of place of birth, either at the initial or terminal censuses, and (4) errors in the adjustment of the data for international migration of the Canadian-born population. In most cases, survival ratios for ages 0-4 to 10-14 are greater than unity, which suggests appreciable underenumeration of children in the age group 0-4. Also, in most of the provinces, the ratios are greater than unity for the age groups 25-29 to 35-39 and 30-34 to 40-44, suggesting again appreciable underenumeration in the most mobile age groups 25-29 and 30-34 or some systematic bias in the reporting of ages. These calculated survival ratios (Table 3.3) were applied to the appropriate age-sex and residence distributions of the in-born population of each province (enumerated in the province and outside),<sup>11</sup> and estimates of the intercensal net migration of in-born, out-born and the net balance (sum of the two) for each province were obtained by subtraction of the expected from the corresponding observed numbers. The results are given in Appendix Table A.1.

**3.1.4 ALTERNATE PROCEDURE** - According to the procedure used in the previous section, survival ratios of in-born population of a province are applied to the in-born population enumerated there and elsewhere. Consequently, different survival ratios are applied to the life-time non-migrant and life-time in-migrant components of the population enumerated in the province. An alternate procedure to the one employed here is to apply survival ratios of the in-born population to (1) the population born in and residing in the given province at the census date and (2) the population born elsewhere and residing in the given province at the same date.<sup>12</sup> In this procedure, the assumption is that the survival ratios of the in-born population are applicable to the entire resident population of an area. From a practical point of view, such a procedure can be justified but the main objection to it is that only the component of in-born population enumerated in the same area or province of birth gets its proper survival ratio. As stated by Eldridge and Kim (1968, pp. 8 and 9), "the entire migrant population ('migrant' in the sense of their living outside their area of birth) gets the 'wrong' survival ratio, that is, a survival ratio to which they have not contributed, the ratio of a closed population to which they do not belong".

## ESTIMATES FROM PLACE-OF-BIRTH DATA

The effect of the two estimation procedures could be found only in the net migration estimates of the out-born population and in the net balance of migration, which is the sum of net migration among in-born and out-born. Estimates of net migration using the two procedures were prepared and are compared for 1951-1961 in Table 3.4; a summary comparison of the results is as follows (procedure A was used in the present study and B refers to the alternate procedure):

Province or territory	Total net migration		Deviation
	Procedure	Procedure	B - A, 100
	A	B	A
	No.	No.	p.c.
Newfoundland .....	-13,800	-13,872	- 0.1
Prince Edward Island.....	- 9,987	- 9,928	0.6
Nova Scotia.....	-36,070	-36,021	0.1
New Brunswick.....	-30,712	-30,327	1.3
Quebec.....	-26,288	-26,586	- 1.1
Ontario.....	29,301	28,876	- 1.4
Manitoba .....	-31,556	-32,619	- 3.4
Saskatchewan .....	-72,510	-71,837	0.9
Alberta.....	27,494	20,426	-25.7
British Columbia .....	53,992	34,829	-35.5
Yukon and Northwest Territories	507	696	37.3

Except for Alberta, British Columbia and the Yukon and Northwest Territories, the relative deviations between procedures A and B are small, ranging from 0.1 to 3.4 per cent; the deviations for the Territories can be discounted because of the small numbers there. The high percentage deviations in Alberta and British Columbia were the combined effect of two factors: (1) the comparatively high proportion of out-born persons there, and (2) the relatively low death rates in the two provinces. In 1965, for example, when the age-adjusted death rate for Canada was 7.3 per 1,000 population, the corresponding rates for Alberta and British Columbia were 6.7 and 7.0, respectively (DBS, *Vital Statistics, 1965*, p. 106), the second and fourth lowest rates among the provinces. The low death rates for the two provinces are also reflected in the survival ratios (Tables 3.3 and 3.6). The over-all place-of-birth survival ratios for 1951-1961

$\left( \frac{\text{population aged 10+ in 1961}}{\text{population aged 0+ in 1951}} \right)$  calculated by sex for each province showed that British Columbia had the highest survival ratios followed by Alberta. They were as follows:

## INTERNAL MIGRATION IN CANADA

<u>Province</u>	<u>Male</u>	<u>Female</u>
Newfoundland.....	0.919781	0.918397
Prince Edward Island .....	0.873611	0.892451
Nova Scotia .....	0.905450	0.915533
New Brunswick .....	0.901630	0.909375
Quebec .....	0.929954	0.940671
Ontario .....	0.907798	0.923891
Manitoba .....	0.949508	0.956618
Saskatchewan.....	0.971174	0.975560
Alberta .....	0.994083	1.001543
British Columbia .....	1.000376	1.009538
Yukon and Northwest Territories .....	0.937500	0.952371
Canada .....	<u>0.930353</u>	<u>0.941317</u>

Examination of the migration estimates by age shows that the relative differences are larger at the older ages. The absolute differences between the two estimates for males in Alberta, for example, range from a low of 0.1 per cent for the age group 15-19 to a high of 1251 per cent for the age group 65-69. Similar results were observed in a recent study for the United States using the census division of birth residence data (Eldridge and Kim, 1968, pp. 12 and 13). The relative differences by age also show that Alberta and British Columbia had the highest differences between the two series of estimates.

If procedure A is accepted as the better of the two, it may be concluded from the foregoing findings that in most cases procedure B can be relied upon for estimating interprovincial total decade net migration 10 years of age and over, and for five-year age groups under age 50.

### 3.2 MIGRATION ESTIMATES FROM CENSUS AGE DISTRIBUTIONS

The basic methodology and the underlying assumptions of the standard census survival ratio method of estimating intercensal net migration are described in a number of publications and need not be discussed here (Lee, 1957, pp. 15-56; Hamilton and Henderson, 1944, pp. 197-206; Siegel and Hamilton, 1952, pp. 475-500; Price, 1955, pp. 689-700; Tarver, 1962, pp. 841-862; Zachariah, 1962, pp. 175-183). A forward census survival ratio method has been used in the present study to estimate (1) the intercensal net migration among the native born and (2) the intercensal net migration among the foreign born. The former is estimated only for the period 1951-1961 and mainly for the comparison of estimates calculated by different methods.

**3.2.1 CENSUS AND LIFE TABLE SURVIVAL RATIO ESTIMATES OF NET MIGRATION, 1951-1961** – The major problem in estimating migration by the census survival ratio method is to achieve a “closed population” for Canada, which is the theoretical requirement for calculating national census survival ratios. A reasonably closed population of the native born was obtained by the inclusion of the Canadian-born population enumerated in the censuses of the United States with the corresponding numbers enumerated in the Canadian censuses (Section 3.13). Using the estimated Canadian-born population for 1951 and 1961, 10-year forward census survival ratios for the Canadian-born population were calculated by dividing the number in a given age-sex category in 1961 by the number for the same cohort in 1951 (same age group when it was 10 years younger). These ratios, along with the life table survival ratios for the same period (calculated from the average values of the Canadian life tables 1950-1952 and 1960-1962 for the total population), and the census survival ratios for the United States for the period 1950-1960 are given in Table 3.4.

The comparison of census and life table survival ratios given in Table 3.4 and portrayed in Chart 3.1 suggests errors in some of the five-year age groups in the census distributions. As stated before, survival ratios should normally form a series with a smooth downward trend as shown by the life table survival ratios reflecting increasing mortality with increasing age. This, however, is not so in the Canadian and United States census survival ratios. Not only are there undulations, but in some cases the survival ratios are greater than unity. Such fluctuations in census survival ratios may be due to such factors as underenumeration or overenumeration, errors in reporting age either at the initial or at the terminal year, and errors in the adjustment of the census age data for international migration. There are fewer census survival ratios greater than unity for the United States, which suggests that enumeration and other errors in age data in the United States are relatively smaller than in Canada.

Despite the limitations of the census survival ratios, they are generally preferred for estimating intercensal net migration using census age distributions. Life table survival ratios applied to census data that are not corrected for various errors in age data may yield misleading results. Application of census survival ratios may also yield misleading results (Stone, 1967<sup>a</sup>, pp. 310-330). However, census survival ratios have certain “built-in” corrections for certain inadequacies of the basic data. The merits of using census survival ratios compared with life table survival ratios, and the main assumption on enumeration errors involved in the application of national census survival ratios to provincial age data, have been demonstrated by many scholars in the field of migration (Hamilton and Henderson, 1944, p. 200; Lee, 1957, p. 26; Tarver, 1962, pp. 847-862; Zachariah, 1962, pp. 175-183; Hamilton, 1966, pp. 404-414).

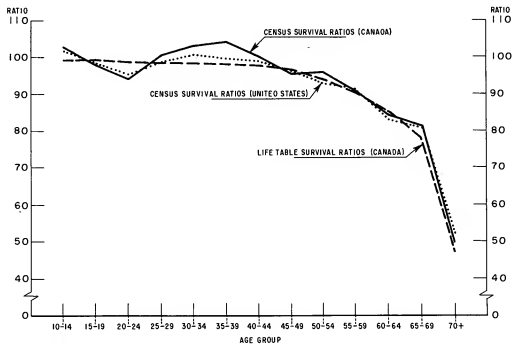
Table 3.4 – Forward Census Survival Ratios of the Native-born Population and 10-year Life Table Survival Ratios for Canada, by Age Group and Sex, 1951 - 1961, and Corresponding United States Census Survival Ratios, 1950 - 1960 (Native White)

Age group	Census survival ratios, Canada		Census survival ratios, United States		Life table survival ratios, Canada	
	Male	Female	Male	Female	Male	Female
0 - 4 to 10-14 .....	1.02857	1.02887	1.01413	1.01966	0.99045	0.99299
5 - 9 " 15-19 .....	0.97812	0.99141	0.98277	0.99815	0.99175	0.99519
10-14 " 20-24 .....	0.94046	0.98910	0.95305	0.98748	0.98759	0.99389
15-19 " 25-29 .....	1.00332	1.01422	0.98216	1.00889	0.98392	0.99228
20-24 " 30-34 .....	1.03035	1.02043	1.00350	1.00997	0.98307	0.99070
25-29 " 35-39 .....	1.03935	1.03566	0.99606	1.00209	0.98121	0.98783
30-34 " 40-44 .....	1.00072	0.97634	0.98931	0.99222	0.97489	0.98253
35-39 " 45-49 .....	0.95204	0.94359	0.95748	0.95911	0.96167	0.97376
40-44 " 50-54 .....	0.95753	0.96760	0.92657	0.94650	0.93838	0.96042
45-49 " 55-59 .....	0.90664	0.93269	0.90839	0.95158	0.90205	0.94067
50-54 " 60-64 .....	0.84338	0.88488	0.83187	0.90696	0.84982	0.90968
55-59 " 65-69 .....	0.81085	0.87759	0.80762	0.92233	0.78137	0.86094
60 + " 70 + .....	0.49848	0.56190	0.52426	0.62011	0.46998	0.52054

SOURCE: Life table survival ratios were computed from the average  $L_x$  values of the Canadian life tables, 1950-1952 and 1960-1962; U.S. Census survival ratios were taken from Miller, 1964, p. 70.

CHART 3.1

FORWARD CENSUS SURVIVAL RATIOS OF THE NATIVE-BORN POPULATION  
AND TEN-YEAR LIFE TABLE SURVIVAL RATIOS FOR MALES, BY AGE  
GROUP, CANADA, 1951-1961 AND CENSUS SURVIVAL RATIOS,  
UNITED STATES, 1950-1960 (NATIVE WHITE)



Source: Table 3.4

The forward census survival ratios for Canada given in Table 3.4 were applied to the provincial age distributions in 1951 to obtain estimates of the expected population in 1961. The difference between the expected population and the enumerated population in 1961 yielded estimates of net migration during 1951-1961 among the native born for the provinces, by sex, for age groups 10 years and over in 1961.

Intercensal net migration among native-born population by age and sex for the provinces during 1951-1961 was also estimated, using the life table survival ratios given in Table 3.5 mainly for comparative purposes.

### **3.3 COMPARISON OF INTERCENSAL MIGRATION ESTIMATES FOR THE CANADIAN-BORN POPULATION, CALCULATED BY DIFFERENT METHODS, 1951- 1961**

The purpose of this comparison is to examine the relative accuracy of the three sets of intercensal migration estimates calculated by three methods: (1) the place-of-birth survival ratio (PBSR); (2) the census survival ratio (CSR); and (3) the life table survival ratio (LTSR). The three sets of survival ratios used for the estimates are given in Tables 3.3 and 3.4. The interprovincial net migration estimates prepared by all three methods include migration between Canada and the United States. In order to separate this component in estimating migration by the PBSR method, the Canadian-born population enumerated in the United States would have had to be distributed according to the province of birth and residence, by age and sex for each province. Because of the laborious computations involved, it was decided not to separate the migration between Canada and the United States.

The total net migration in each province by the three methods and the index of deviation are presented in Table 3.5. As expected, the results show that PBSR and CSR estimates are closer than CSR and LTSR estimates. The same results apply as well to the migration estimates by age. The age-specific net migration rates for males calculated from the three sets are presented in Chart 3.2. The migration rates by age were calculated by dividing the net migration in a particular age group by the corresponding average native population enumerated in that age-sex group. The average population for an age-sex group was estimated by averaging the population in 1961 and the population for the same cohort in 1951. The age-specific migration rates plotted on Chart 3.2 show that, although there are differences in the volume and direction of migration according to the three sets of estimates, the differences are less between the CSR and PBSR rates than between the CSR and LTSR rates. The most striking finding is that the net migration curves by age obtained by CSR and PBSR methods are smoother than the curves obtained by the use of the more accurate life table survival ratios (for similar results, see Hamilton, 1934, and Hamilton and Henderson, 1944, pp. 197-206).

## COMPARISON OF ESTIMATES FOR THE CANADIAN BORN

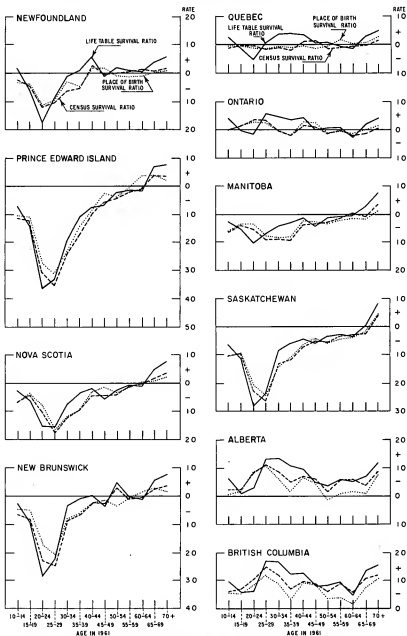
**Table 3.5 – Interprovincial Net Migration Estimates from Place-of-Birth Survival Ratios (PBSR), Census Survival Ratios (CSR) and Life Table Survival Ratios (LTSR) for Canadian-born Population Aged 10 and Over, by Sex, 1951-1961**

Sex and province or territory	PBSR (1)	CSR (2)	LTSR (3)	Index of deviation (1) / (2)	Index of deviation (3) / (2)
<b>Males</b>					
Nfld. ....	- 6,029	- 6,206	- 3,543	+ 0.97148	+ 0.57090
P.E.I. ....	- 4,708	- 5,408	- 4,699	+ 0.87056	+ 0.86890
N.S. ....	- 16,172	- 17,924	- 13,306	+ 0.90225	+ 0.74236
N.B. ....	- 13,713	- 16,955	- 13,347	+ 0.80879	+ 0.78720
Que. ....	- 11,654	- 12,112	+ 16,397	+ 0.96219	- 1.35378
Ont. ....	+ 12,047	+ 6,954	+ 37,592	+ 1.73238	+ 5.40581
Man. ....	- 13,738	- 15,066	- 10,432	+ 0.91185	+ 0.69242
Sask. ....	- 34,143	- 35,478	- 30,562	+ 0.96237	+ 0.86144
Alta. ....	+ 15,604	+ 19,860	+ 25,368	+ 0.78570	+ 1.27734
B.C. ....	+ 29,174	+ 37,409	+ 43,943	+ 0.77986	+ 1.17466
Y.T. and N.W.T. ....	+ 193	+ 138	+ 378	+ 1.39855	+ 2.73913
<b>Canada</b> .....	<b>- 43,139</b>	<b>- 44,788</b>	<b>+ 47,789</b>	<b>+ 0.96318</b>	<b>- 1.06700</b>
<b>Females</b>					
Nfld. ....	- 7,840	- 10,724	- 8,386	+ 0.73107	+ 0.78245
P.E.I. ....	- 5,277	- 6,145	- 5,485	+ 0.85875	+ 0.89292
N.S. ....	- 19,897	- 23,210	- 19,177	+ 0.85726	+ 0.82671
N.B. ....	- 17,001	- 23,112	- 19,760	+ 0.73559	+ 0.85523
Que. ....	- 14,630	- 19,828	+ 5,034	+ 0.73784	- 0.25101
Ont. ....	+ 17,258	+ 21,441	+ 46,851	+ 0.80491	+ 2.18138
Man. ....	- 17,814	- 19,415	- 15,604	+ 0.91754	+ 0.80458
Sask. ....	- 38,369	- 39,410	- 35,385	+ 0.97358	+ 0.89840
Alta. ....	+ 11,887	+ 16,139	+ 20,637	+ 0.73654	+ 1.27734
B.C. ....	+ 24,813	+ 33,649	+ 38,823	+ 0.73741	+ 1.15275
Y.T. and N.W.T. ....	+ 310	+ 298	+ 436	+ 1.04027	+ 1.45973
<b>Canada</b> .....	<b>- 66,551</b>	<b>- 70,317</b>	<b>+ 7,984</b>	<b>+ 0.94644</b>	<b>- 0.10990</b>

SOURCE: Estimated as explained in Sections 3.2 and 3.3.

CHART 3.2

RATES OF INTERPROVINCIAL NET MIGRATION AS ESTIMATED BY  
THE CSR, PBSR AND LTSR METHODS FOR CANADIAN-BORN MALES  
10 YEARS OLD AND OVER, BY AGE, PROVINCES, 1951-1961



Source: Appendix Table A.2 for PBSR rates; and Section 3.2.1 for CSR and LTSR rates.

In order to understand the reasons for the differences between the three sets of estimates and to assess the relative reliability of each, the major factors that create these differences may be examined. If there were no errors in the age and place-of-birth data used, and the survival ratios were exact, the estimates from all three methods should be identical. This is because estimates of intercensal net migration from the three methods give only the net migration among those living to the end of the intercensal period. The divergence in the results suggests errors in the data and limitations of the methods used for correcting errors in basic data. The main factors that may affect the estimates are: (1) underenumeration or overenumeration of the population; (2) mis-statement of age and/or place of birth; (3) international migration; and (4) application of incorrect survival ratios.

Errors in the basic data affect all three sets of intercensal estimates, and their effect depends on the variation of enumeration errors in the two censuses. One of the assumptions involved in the application of the census survival ratio method is that, to obtain migration estimates free from enumeration errors, "the ratio of the degree of enumeration in any age-sex group in a state (i.e., the proportion which the enumerated population in any age-sex group bears to the true population) to that of the nation" should be equal for the same age-sex cohort in both the censuses (Zachariah, 1962, p. 177). The available information on the quality of census data suggests that Canadian censuses have been of varying quality and that the proportionate enumeration errors are of unequal magnitude in the different censuses (Chapter Two). Therefore, it is unlikely that this assumption will be fully valid in the estimates made here. However, under this assumption, the amount of migration and the error components will be separated, and the estimated amount of migration will be independent of the error in the first census. As a consequence, when the amount of migration is divided by the population at the second census, it is possible to get a migration rate free from enumeration errors. The reason for this is that the percentage error in the migration estimate would be equal to the percentage error of enumeration in the population at the second census (for proof, see Zachariah, 1964, p. 149). It also permits the obtaining of net migration estimates above age 10 free from the effect of enumeration errors under age 10, which are common in census enumerations. The effect of enumeration errors is likely to be greater when migration estimates are made by the LTSM method than they are by the CSR and PBSR methods, because of the application of fairly correct survival ratios to incorrect population data. The effect of mis-statement is likely to be different for CSR and PBSR estimates. If a person born in another province is reported as being born in the province of enumeration, he will not be counted as a life-time migrant. On the other hand, if the age of a migrant (a person residing outside the province of birth) is misreported, he will appear in another age in the PBSR estimate.

This is not possible by the CSR method. If the age misreporting of the population is not of the same type and magnitude in the provinces and the country as a whole, the error from this source in the migration estimates by the CSR method can be substantial. By the LTSR method, any defect in the reported age distribution will have its full effect on the estimates and there is no possibility for cancellation of this error.

The effect of international migration is likely to be greater in the estimates by the CSR and PBSR methods. For, by the LTSR method, only the errors in the estimation of age distributions of emigrants and their allocation by province of origin affect the estimates, since the survival ratios applied are independent of the effect of international migration.

Because separate survival ratios for each province have been applied in the case of the PBSR method, the error in the migration estimates resulting from the use of incorrect survival ratios is likely to be less by this method than by the CSR and LTSR methods where national survival ratios are used on the assumption of equality of mortality level and pattern in the provinces and in the country as a whole. In the case of the estimates by the LTSR method used here, there is an additional error because the survival ratios used are derived from the life table for the total population (Canadian born and foreign born) and not solely for the Canadian-born population as required in the present case. The major differences in the estimates by the LTSR method compared with the other two methods, particularly for Quebec where the net migration is in the opposite direction according to the LTSR method, may be attributed to the use of improper survival ratios. Better results from the LTSR method could have been obtained had regional LTSR been applied to the total population instead of applying national LTSR to the Canadian-born population. Because the purpose here was to estimate the migration among the Canadian-born population, such a procedure was not adopted.

The preceding discussion and the comparison of the three sets of migration estimates suggest that the net migration estimates for the Canadian born by the PBSR method are probably more reliable than those by the other two methods. Judging from the methodology, the data used and the consistency of the results, the second best is the set of estimates by the CSR method. The main difference between the PBSR method and the CSR method lies in the use of different sets of survival ratios; provincial survival ratios were used in the PBSR method and national census survival ratios in the CSR method. The level and pattern of survival ratios between Canada and the provinces can be gauged from Tables 3.3, 3.4 and 3.6 which give, respectively, the place-of-birth survival ratios for the provinces, the national census survival ratios, and the life table survival ratios for Canada and the regions during 1951-1961.

Table 3.6 – Age-specific and Over-all Average Life Table Survival Ratios for Canada and Regions, by Sex, 1951-1961

Sex and age group	Canada	Atlantic	Quebec	Ontario	Prairies	British Columbia
<b>Males</b>						
0- 4 to 10-14 .....	0.99045	0.98913	0.98850	0.99175	0.99148	0.99119
5- 9 " 15-19 .....	0.99175	0.99123	0.99115	0.99242	0.99262	0.99149
10-14 " 20-24 .....	0.98759	0.98727	0.98741	0.98859	0.98785	0.98540
15-19 " 25-29 .....	0.98392	0.98330	0.98364	0.98559	0.98406	0.98029
20-24 " 30-34 .....	0.98307	0.98145	0.98230	0.98526	0.98354	0.97940
25-29 " 35-39 .....	0.98121	0.97890	0.97990	0.98344	0.98242	0.97799
30-34 " 40-44 .....	0.97489	0.97333	0.97260	0.97662	0.97767	0.97230
35-39 " 45-49 .....	0.96167	0.96248	0.95782	0.96220	0.96711	0.96003
40-44 " 50-54 .....	0.93838	0.94206	0.93237	0.93686	0.94898	0.93778
45-49 " 55-59 .....	0.90205	0.90969	0.89290	0.89739	0.92029	0.90323
50-54 " 60-64 .....	0.84982	0.86477	0.83697	0.84023	0.87589	0.85399
55-59 " 65-69 .....	0.78137	0.80503	0.76545	0.76682	0.81302	0.78710
60+ " 70+ .....	0.46998	0.48541	0.45834	0.46025	0.48602	0.47890
Over-all ratios <sup>a</sup> .....	0.85775	0.85909	0.85589	0.85725	0.86068	0.85768
<b>Females</b>						
0- 4 to 10-14 .....	0.99299	0.99240	0.99164	0.99403	0.99306	0.99306
5- 9 " 15-19 .....	0.99519	0.99518	0.99474	0.99591	0.99523	0.99510
10-14 " 20-24 .....	0.99389	0.99332	0.99345	0.99515	0.99359	0.99326
15-19 " 25-29 .....	0.99228	0.99095	0.99145	0.99392	0.99223	0.99172
20-24 " 30-34 .....	0.99049	0.98889	0.98918	0.99234	0.99164	0.99069
25-29 " 35-39 .....	0.98783	0.98600	0.98563	0.98935	0.98973	0.98816
30-34 " 40-44 .....	0.98274	0.98088	0.97956	0.98388	0.98529	0.98365
35-39 " 45-49 .....	0.97511	0.97254	0.97014	0.97479	0.97786	0.97549
40-44 " 50-54 .....	0.96042	0.96002	0.95599	0.96135	0.96628	0.96148
45-49 " 55-59 .....	0.93937	0.94045	0.93294	0.94211	0.94915	0.94354
50-54 " 60-64 .....	0.90968	0.91013	0.89630	0.91082	0.92247	0.91850
55-59 " 65-69 .....	0.86094	0.86477	0.84217	0.85966	0.87947	0.87653
60+ " 70+ .....	0.52054	0.52847	0.50247	0.51814	0.53621	0.53926
Over-all ratios <sup>a</sup> .....	0.86665	0.86684	0.86420	0.86700	0.86885	0.86841

<sup>a</sup> Over-all survival ratios were calculated by:  $\frac{L_x 10+}{L_x 0+}$

SOURCES: DBS Reference Papers re Canadian Life Tables, Catalogue Nos. 84-510, 84-512, 84-516 and 84-517.

Further, whatever the relative accuracy of the estimates by the PBSR method, it provides more details about the net migration of the native born than those by the other two methods. Thus, it is possible to estimate separately for each province (1) net gains or losses due to migration of persons who were born in the same province and (2) net gains or losses due to the migration of persons born elsewhere in the country. Also, it is possible to get detailed data by the PBSR method for studying individual intercensal migration streams between provinces.

The sum of the net migration for all the provinces together should have yielded a zero balance for Canada. This did not occur in the estimates made here by the three methods because of the effect of external migration. The net balance for Canada as a whole represents the net migration between Canada and other countries, mainly between Canada and the United States during the three decades. The PBSR method estimated a loss of 43,100 males and 66,500 females among the Canadian-born population during 1951-1961, while the CSR estimated a loss of 44,700 males and 70,300 females. Most of these persons probably migrated to the United States. When the estimates by the CSR method were made after distributing the estimated Canadian-born population in the United States in 1951 and 1961 by province of origin, the balance for Canada was reduced to almost zero for both sexes. Thus, the net migration estimates given in Table 3.5 and Appendix Table A.1 include migration between Canada and the United States as well. By applying the provincial survival ratios in Table 3.3 to the Canadian-born population enumerated in the United States by age and sex in each province of origin, separate net migration estimates between Canada and the United States could be prepared for each province.

### **3.4 ADDITIONAL COMMENTS ON ESTIMATES OF NET INTERPROVINCIAL MIGRATION**

The relative merits of the migration estimates by the place-of-birth survival ratio method over the CSR and LTSR methods are discussed in the preceding section where it is shown that the level and pattern of migration estimates by the PBSR method were closer to those by the CSR method than to the estimates by the LTSR method (Chart 3.2). Whatever relative superiority the PBSR method has, the differences between the estimates at the advanced ages should be interpreted with great caution because demographic data for persons in the advanced ages are generally rather poor. Of the advanced ages, the estimates for the open-age interval 70 years and over are likely to be the most unreliable. Further evaluation of the migration estimates from place-of-birth data is given in Chapters Six and Seven. Despite the relative merits of migration estimates by the PBSR method, it may be noted that the estimates should not be taken as an exact measurement of net migration but rather as an indication of the dimension of the movements of the population.

For the sake of convenience, the detailed net migration estimates by age and sex for each province of birth originally computed are rearranged and are presented in Appendix Table A.1. The table gives for each province (1) the decade net migration of its own in-born population with respect to all other provinces together, i.e., mostly total "net out-migration"; (2) the decade net migration of its own out-born population classified by province of birth, i.e., mostly "net in-migration" by province of birth; and (3) the net balance of migration, which is the sum of net in-migration and net out-migration. The term "net balance of migration" is used to avoid any confusion that may arise on account of the other two "nets", viz., net migration of in-born population and net migration of out-born population. Thus, for Prince Edward Island, the numbers under "net migration of in-born" represent mostly the total net interprovincial out-migration from that province to other provinces, the numbers under "net migration of out-born" represent mostly the total in-migration to Prince Edward Island from other provinces, and the numbers under "net balance of migration" represent the sums of the net in-migration and out-migration (Appendix Table A.1).

The net migration estimates by age and sex for the Canadian-born population given in Appendix Table A.1 were converted into migration rates and are presented in Appendix Table A.2. As explained in Section 3.3, the rates were calculated from the appropriate average Canadian-born population of the birth cohort during each intercensal period.

### **3.5 NET MIGRATION AMONG PERSONS UNDER AGE 10**

The three methods of estimating intercensal migration by age yield estimates only for the population aged 10 and over on the terminal census date (i.e., persons who were enumerated in the first census and survived to the second census and not those born during the intercensal period). Hence, separate net migration estimates were directly derived for population under age 10 from the place-of-birth and residence distributions by age. For this group "life-time" migration is the intercensal migration (Eldridge and Kim, 1968, p. 7). Therefore, intercensal net migration estimates for the group under age 10 were directly derived from the place-of-birth by residence data. The results are given in Table 3.7.

### **3.6 ESTIMATION OF INTERCENSAL MIGRATION AMONG THE FOREIGN BORN**

Migration estimates for the foreign-born population were prepared by the census survival ratio method, using census survival ratios for the native born adjusted for mortality differences between the native born and the foreign born. In order to establish the difference in mortality level and pattern between the native-born and the foreign-born populations, separate

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**Table 3.7 – Net Interprovincial Migration of the Canadian Born and Foreign Born Aged 0-9, by Sex, 1931- 1941, 1941- 1951 and 1951- 1961**

Province or territory	1931 - 1941		1941 - 1951		1951 - 1961	
	Male	Female	Male	Female	Male	Female
Canadian born						
	No.	No.	No.	No.	No.	No.
Nfld. ....	-	-	-	-	- 450	- 362
P.E.I. ....	- 127	- 103	- 123	- 202	- 220	- 203
N.S. ....	+ 195	+ 162	- 2,837	- 2,774	- 2,659	- 2,414
N.B. ....	- 344	- 266	- 2,163	- 1,992	- 1,432	- 963
Que. ....	+ 275	+ 173	- 1,012	- 1,042	+ 868	+ 919
Ont. ....	+ 3,617	+ 3,540	+ 5,698	+ 5,714	+ 3,622	+ 3,556
Man. ....	- 1,215	- 1,112	- 3,267	- 3,169	- 2,986	- 3,152
Sask. ....	- 5,464	- 5,465	- 5,260	- 4,985	- 5,360	- 5,215
Alta. ....	- 1,555	- 1,665	+ 995	+ 1,157	+ 2,136	+ 1,988
B.C. ....	+ 4,442	+ 4,571	+ 7,690	+ 7,091	+ 6,383	+ 5,801
Y.T. and N.W.T. ....	+ 176	+ 165	+ 279	+ 202	+ 98	+ 45
Canada .....	-	-	-	-	-	-
Foreign born						
	No.	No.	No.	No.	No.	No.
Nfld. ....	-	-	-	-	283	272
P.E.I. ....	49	38	93	104	153	119
N.S. ....	412	416	794	726	1,297	1,209
N.B. ....	296	229	863	813	1,285	1,156
Que. ....	1,162	1,107	4,849	4,736	11,362	10,618
Ont. ....	2,892	2,888	19,047	17,762	34,928	33,344
Man. ....	433	417	2,059	1,876	3,264	2,995
Sask. ....	266	263	1,233	1,133	1,501	1,288
Alta. ....	501	510	3,512	3,162	5,750	5,384
B.C. ....	817	768	3,902	3,639	7,582	7,108
Y.T. and N.W.T. ....	13	17	37	30	105	82
Canada .....	6,841	6,653	36,389	33,981	67,510	63,575

SOURCE: Estimated as explained in Section 3.5.

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life tables were constructed for the two groups for 1941-1951 and the survival ratios derived from these were then compared.

From unpublished data on deaths by place-of-birth, age and sex obtained from the Vital Statistics Section of the DBS for 1941-1951,<sup>12</sup> death rates by age and sex were computed for the foreign-born and native-born populations (excluding Newfoundland). Average population of the censuses of 1941 and 1951 was used as the denominator for the calculation of death rates. The death rates for the foreign born and the native born during 1941-1951 are given in Table 3.8.

**Table 3.8 - Death Rates, by Age and Sex, for the Canadian Born and the Foreign Born, 1941-1951**

(Rate per 1,000 average respective population, 1941-1951 excluding Newfoundland)

Age group	Foreign born		Canadian born	
	Male	Female	Male	Female
0- 4 .....	4.4	4.1	15.1	11.8
5- 9 .....	0.7	0.3	1.2	0.9
10-14 .....	0.6	0.4	1.1	0.8
15-19 .....	2.1	0.9	1.7	1.2
20-24 .....	3.8	1.3	2.1	1.7
25-29 .....	2.0	1.0	2.1	1.9
30-34 .....	1.8	1.4	2.4	2.2
35-39 .....	2.9	2.3	3.0	2.7
40-44 .....	4.3	3.0	4.2	3.7
45-49 .....	6.3	4.7	6.6	5.3
50-54 .....	9.5	6.7	10.2	7.7
55-59 .....	15.6	10.4	15.9	11.6
60-64 .....	24.6	16.2	24.0	17.4
65-69 .....	34.5	24.2	35.6	27.5
70-74 .....	51.1	38.4	54.1	43.5
75-79 .....	80.4	66.8	86.0	72.7
80-84 .....	124.8	106.8	134.5	120.3
85-89 .....	190.8	173.1	211.4	190.1
90+ .....	281.8	277.4	307.1	275.3
All ages .....	16.3	12.2	8.9	7.6
Standardized death rate <sup>a</sup> .....	8.5	7.0	10.7	8.9

<sup>a</sup> Standardized with respect to age, taking the 1951 age-sex distributions of the total population of Canada as the standard.

SOURCE: Computed from unpublished data obtained from the Vital Statistics Section, DBS.

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From the data in Table 3.8, five-year life table mortality rates ( $n^q_x$ ) were computed using the formula  $n^q_x = \frac{2n \cdot n^m_x}{2 + n \cdot n^m_x}$  for the age group 0-4 (where  $n$  stands for the age interval, and  $n^m_x$  for age-specific death rates), and the Reed and Merrell table for the other groups (for details, see Jaffe, 1951, p. 13 and pp. 22-26). From the  $n^q_x$  values, other life table values were computed from which 10-year survival ratios were finally derived for the Canadian-born and foreign-born populations. By dividing the life table survival ratios for the foreign born by the corresponding ratios for the Canadian born, correction factors were obtained to adjust the census survival ratios of the Canadian-born population. The life table survival ratios for the foreign born and the Canadian born and the correction factors derived from them are presented in Table 3.9.

**Table 3.9 – Ten-year Life Table Survival Ratios of the Foreign Born and Canadian Born, by Sex, 1941-1951, and the Correction Factors**

Age	Males			Females		
	Foreign born	Canadian born	Correction factor (1) (2)	Foreign born	Canadian born	Correction factor (4) (5)
	(1)	(2)	(3)	(4)	(5)	(6)
0- 4 to 10-14 ....	0.98428	0.95419	1.03153	0.98717	0.96412	1.02391
5- 9 " 15-19 ....	0.99017	0.98778	1.00242	0.99499	0.99069	1.00434
10-14 " 20-24 ....	0.97889	0.98352	0.99529	0.99109	0.98761	1.00352
15-19 " 25-29 ....	0.97120	0.97974	0.99128	0.98855	0.98373	1.00490
20-24 " 30-34 ....	0.97618	0.97827	0.99786	0.98823	0.98075	1.00763
25-29 " 35-39 ....	0.97903	0.97547	1.00365	0.98489	0.97731	1.00776
30-34 " 40-44 ....	0.97087	0.96892	1.00201	0.97764	0.97189	1.00592
35-39 " 45-49 ....	0.95656	0.95589	1.00070	0.96789	0.96249	1.00561
40-44 " 50-54 ....	0.93612	0.93328	1.00304	0.95297	0.94691	1.00640
45-49 " 55-59 ....	0.90320	0.89842	1.00532	0.93054	0.92275	1.00844
50-54 " 60-64 ....	0.85028	0.84832	1.00231	0.89648	0.88661	1.01113
55-59 " 65-69 ....	0.78143	0.78115	1.00036	0.84660	0.83225	1.01724
60+ " 70+ .....	0.47981	0.46855	1.02403	0.51933	0.50224	1.03403

SOURCE: Computed as explained in Section 3.6.

The figures in Tables 3.8 and 3.9 indicate a lower mortality level for the foreign born than for the Canadian born. Because migration to Canada is very selective, and because only those who meet the high health standards prescribed by the Department of Manpower and Immigration are eligible to migrate, it is reasonable to expect lower mortality among the foreign born in Canada. The differences are greatest for the age group under five years.

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This is understandable because most of the migrant children will have passed the early infant stage when the incidence of mortality is the highest. Unfortunately, because death statistics of the foreign born and Canadian born separately are not available by age for any other period, it is not possible to arrive at any firm conclusions on the differences between the level and pattern of mortality among Canadian born and foreign born in Canada.

**Table 3.10 – Forward Census Survival Ratios of the Canadian-born Population, by Age and Sex, 1931- 1941, 1941- 1951 and 1951- 1961**

Age	1931- 1941	1941- 1951	1951- 1961
<b>Males</b>			
0- 4 to 10- 14 .....	1.013200	1.026511	1.028570
5- 9 " 15- 19 .....	0.974014	0.961298	0.978101
10- 14 " 20- 24 .....	0.942951	0.915628	0.940461
15- 19 " 25- 29 .....	0.930346	0.918715	1.003315
20- 24 " 30- 34 .....	0.929343	0.954879	1.030348
25- 29 " 35- 39 .....	1.027912	1.000179	1.039353
30- 34 " 40- 44 .....	1.013216	0.973801	1.000716
35- 39 " 45- 49 .....	0.993105	0.904278	0.952038
40- 44 " 50- 54 .....	0.975437	0.895414	0.957525
45- 49 " 55- 59 .....	0.810835	0.801643	0.906644
50- 54 " 60- 64 .....	0.778889	0.765958	0.843380
55- 59 " 65- 69 .....	0.785876	0.762752	0.810845
60+ " 70+ .....	0.437694	0.537644	0.498475
<b>Females</b>			
0- 4 to 10- 14 .....	1.018954	1.024002	1.028866
5- 9 " 15- 19 .....	0.985606	0.977899	0.991406
10- 14 " 20- 24 .....	0.966102	0.959510	0.989102
15- 19 " 25- 29 .....	0.927670	0.969942	1.014221
20- 24 " 30- 34 .....	0.916778	0.998900	1.020435
25- 29 " 35- 39 .....	1.008469	1.024749	1.035660
30- 34 " 40- 44 .....	1.014941	0.977046	0.976336
35- 39 " 45- 49 .....	0.975527	0.901692	0.943590
40- 44 " 50- 54 .....	0.982482	0.886270	0.967600
45- 49 " 55- 59 .....	0.808921	0.835710	0.932687
50- 54 " 60- 64 .....	0.792985	0.813442	0.884876
55- 59 " 65- 69 .....	0.814246	0.851910	0.877590
60+ " 70+ .....	0.480953	0.604279	0.561901

SOURCE: Computed from the estimated population born in Canada (living in both Canada and the United States). See Section 3.1.3.

**Table 3.11 – Forward Census Survival Ratios of the Non-Canadian-born Population, by Sex and Age, 1931- 1941, 1941- 1951 and 1951- 1961**

(Obtained by applying the correction factors in Table 3.9 to the survival ratios of the Canadian-born population in Table 3.10)

Sex and age	1931- 1941	1941- 1951	1951- 1961
<b>Males</b>			
0- 4 to 10- 14 .....	1.045146	1.058877	1.061001
5- 9 " 15- 19 .....	0.976367	0.963624	0.980468
10- 14 " 20- 24 .....	0.938509	0.911315	0.936031
15- 19 " 25- 29 .....	0.922237	0.910704	0.994566
20- 24 " 30- 34 .....	0.927351	0.952836	1.028143
25- 29 " 35- 39 .....	1.031662	1.003830	1.043147
30- 34 " 40- 44 .....	1.015257	0.975750	1.002727
35- 39 " 45- 49 .....	0.993795	0.904911	0.952704
40- 44 " 50- 54 .....	0.978405	0.898136	0.960436
45- 49 " 55- 59 .....	0.815154	0.805908	0.911467
50- 54 " 60- 64 .....	0.780689	0.767727	0.845328
55- 59 " 65- 69 .....	0.786163	0.763027	0.811137
60+ " 70+ .....	0.448208	0.550564	0.510453
<b>Females</b>			
0- 4 to 10- 14 .....	1.043313	1.048486	1.053466
5- 9 " 15- 19 .....	0.989888	0.982143	0.995709
10- 14 " 20- 24 .....	0.969501	0.962887	0.992584
15- 19 " 25- 29 .....	0.932216	0.974695	1.019191
20- 24 " 30- 34 .....	0.923775	1.006522	1.028221
25- 29 " 35- 39 .....	1.016296	1.032701	1.043697
30- 34 " 40- 44 .....	1.020948	0.982830	0.982116
35- 39 " 45- 49 .....	0.981003	0.906750	0.948884
40- 44 " 50- 54 .....	0.988768	0.891942	0.973793
45- 49 " 55- 59 .....	0.815747	0.842763	0.940559
50- 54 " 60- 64 .....	0.801806	0.822496	0.894725
55- 59 " 65- 69 .....	0.828288	0.866597	0.892720
60+ " 70+ .....	0.497317	0.624843	0.581022

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On the assumption that figures in Table 3.9 are fairly representative of the mortality level and pattern of the foreign born in Canada, the census survival ratios for the Canadian born presented in Table 3.10 were multiplied by the corresponding correction factors, thus obtaining the estimated survival ratios for the foreign-born population given in Table 3.11. Using these survival ratios, net migration among the foreign born was estimated by the same procedure as that for the Canadian born in Section 3.2. The foreign-born population was obtained by subtracting the Canadian born from the total population enumerated, a procedure necessary because in 1931 and 1941 the immigrant population contained Canadian-born immigrants as well. For example, in 1941 the immigrant and foreign-born populations were 2,175,514 and 2,018,847, respectively, the latter being obtained by the residual method stated above. Interprovincial net migration estimates of the foreign born obtained by this method are presented in Table 3.12.

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**Table 3.12 – Net Intercensal Migration of Foreign Born Aged 10 and Over, by Sex and Age Group, 1931- 1941, 1941- 1951 and 1951- 1961**

No.	Sex and age group	Net migration				
		Canada total	P. E. L	N. S.	N. B.	Que.
		1931 - 1941				
		No.	No.	No.	No.	No.
	<b>Males</b>					
1	10- 14 .....	6,217	76	509	89	1,046
2	15- 19 .....	4,041	8	199	- 104	793
3	20- 24 .....	1,330	- 14	151	- 135	633
4	25- 29 .....	- 2,343	- 41	195	- 260	265
5	30- 34 .....	- 3,468	- 43	274	- 101	74
6	35- 39 .....	- 17,832	- 25	- 142	- 241	- 2,831
7	40- 44 .....	- 16,414	3	- 118	- 142	- 2,949
8	45- 49 .....	- 16,507	- 19	- 171	- 112	- 2,232
9	50- 54 .....	- 15,676	- 2	- 236	- 126	- 1,644
10	55- 59 .....	2,140	7	- 3	- 67	- 156
11	60- 64 .....	2,449	- 17	10	14	- 107
12	65- 69 .....	1,037	11	9	- 49	- 171
13	70 + .....	9,531	- 8	77	- 5	596
14	<b>Totals, males .....</b>	<b>- 45,495</b>	<b>- 64</b>	<b>754</b>	<b>- 1,239</b>	<b>- 6,683</b>
	<b>Females</b>					
15	10- 14 .....	6,400	61	467	107	1,101
16	15- 19 .....	3,897	- 17	385	- 95	751
17	20- 24 .....	1,555	- 35	469	- 143	748
18	25- 29 .....	4,395	- 21	378	- 37	989
19	30- 34 .....	2,190	13	229	13	110
20	35- 39 .....	- 5,181	1	37	- 60	- 875
21	40- 44 .....	- 7,474	- 8	- 16	- 71	- 932
22	45- 49 .....	- 10,135	- 4	- 110	- 151	- 1,203
23	50- 54 .....	- 8,551	- 6	- 66	- 84	- 907
24	55- 59 .....	4,649	- 7	51	- 32	328
25	60- 64 .....	3,117	- 8	3	- 27	287
26	65- 69 .....	2,259	- 14	12	- 5	113
27	70 + .....	8,420	- 20	156	- 18	856
28	<b>Totals, females .....</b>	<b>5,541</b>	<b>- 65</b>	<b>1,995</b>	<b>- 603</b>	<b>1,366</b>

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**Table 3.12 – Net Intercensal Migration of Foreign Born Aged 10 and Over,  
by Sex and Age Group, 1931- 1941, 1941- 1951 and 1951- 1961**

Net migration						No.
Ont.	Man.	Sask.	Alta.	B.C.	Y. T. and N.W. T.	
1931- 1941						
No.	No.	No.	No.	No.	No.	
3,009	344	- 99	424	807	12	1
2,706	18	- 829	278	966	6	2
1,401	- 191	- 1,084	- 218	772	15	3
- 904	- 592	- 2,007	- 433	1,360	74	4
1,191	- 1,449	- 4,109	- 1,418	1,965	148	5
- 1,458	- 3,021	- 7,005	- 3,412	182	121	6
- 2,143	- 2,667	- 5,181	- 2,887	- 388	58	7
- 3,957	- 2,071	- 4,196	- 2,539	- 1,235	25	8
- 3,789	- 1,782	- 3,764	- 2,470	- 1,877	14	9
954	235	- 462	359	1,265	8	10
633	267	- 167	31	1,809	- 24	11
531	119	- 206	27	800	- 34	12
2,130	1,226	1,082	1,208	3,226	- 1	13
<b>304</b>	<b>- 9,564</b>	<b>- 28,027</b>	<b>- 11,050</b>	<b>9,652</b>	<b>422</b>	<b>14</b>
3,185	323	- 74	502	721	7	15
2,547	119	- 817	201	814	9	16
1,461	- 212	- 1,131	- 378	762	14	17
3,284	- 172	- 1,368	- 240	1,559	23	18
3,527	- 928	- 2,380	- 448	2,016	38	19
192	- 1,323	- 3,006	- 1,149	982	20	20
- 1,455	- 1,134	- 2,984	- 1,709	851	- 16	21
- 2,907	- 1,499	- 2,920	- 1,723	386	- 4	22
- 2,338	- 1,494	- 2,549	- 1,688	592	- 11	23
1,863	342	- 387	129	2,364	- 2	24
1,142	79	- 245	- 49	1,938	- 3	25
698	216	- 239	11	1,470	- 3	26
2,150	857	724	808	2,909	- 2	27
<b>13,349</b>	<b>- 4,826</b>	<b>- 17,376</b>	<b>- 5,733</b>	<b>17,364</b>	<b>70</b>	<b>28</b>

## INTERNAL MIGRATION IN CANADA

Table 3.12 - Net Intercensal Migration of Foreign Born Aged 10 and Over, by Sex and Age Group, 1931- 1941, 1941- 1951 and 1951- 1961 - continued

No.	Sex and age group	Net migration				
		Canada total	P. E. L.	N. S.	N. B.	Que.
		1941 - 1951				
		No.	No.	No.	No.	No.
	<b>Males</b>					
1	10- 14 .....	11,210	18	118	127	1,243
2	15- 19 .....	11,219	10	52	- 1	1,205
3	20- 24 .....	17,551	- 40	- 228	- 206	1,938
4	25- 29 .....	30,727	32	- 32	- 65	3,912
5	30- 34 .....	23,057	25	- 65	16	3,497
6	35- 39 .....	19,959	1	- 418	- 61	2,728
7	40- 44 .....	14,881	14	- 538	6	1,798
8	45- 49 .....	12,336	- 4	- 516	- 32	664
9	50- 54 .....	8,560	4	- 518	- 39	105
10	55- 59 .....	6,770	2	- 470	- 17	256
11	60- 64 .....	5,489	- 8	- 368	- 50	- 222
12	65- 69 .....	4,585	1	- 300	- 4	- 634
13	70+ .....	- 3,315	- 25	- 640	- 74	- 1,226
14	<b>Totals, males .....</b>	<b>163,029</b>	<b>30</b>	<b>- 3,923</b>	<b>- 400</b>	<b>15,264</b>
	<b>Females</b>					
15	10- 14 .....	10,090	21	108	111	1,158
16	15- 19 .....	8,636	- 1	26	52	1,070
17	20- 24 .....	19,583	- 10	95	102	2,876
18	25- 29 .....	41,482	119	620	671	5,481
19	30- 34 .....	25,599	60	- 181	309	3,556
20	35- 39 .....	15,303	1	- 544	67	1,658
21	40- 44 .....	11,159	13	- 583	- 34	816
22	45- 49 .....	11,276	1	- 545	- 10	477
23	50- 54 .....	10,458	14	- 485	- 15	615
24	55- 59 .....	6,526	- 1	- 467	- 25	138
25	60- 64 .....	3,065	- 4	- 452	- 53	- 421
26	65- 69 .....	521	8	- 409	- 52	- 549
27	70+ .....	- 4,959	- 20	- 765	- 126	- 1,178
28	<b>Totals, females .....</b>	<b>158,739</b>	<b>201</b>	<b>- 3,582</b>	<b>997</b>	<b>15,697</b>

*ESTIMATES OF MIGRATION OF THE FOREIGN BORN*

**Table 3.12 – Net Intercensal Migration of Foreign Born Aged 10 and Over, by Sex and Age Group, 1931- 1941, 1941- 1951 and 1951- 1961 – continued**

Net migration						No.
Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.	
1941- 1951						
No.	No.	No.	No.	No.	No.	
6,012	641	331	1,227	1,487	6	1
5,858	581	450	1,521	1,534	9	2
11,311	795	207	1,675	1,997	102	3
20,588	1,251	- 490	1,915	3,438	178	4
14,834	887	- 327	1,276	2,799	115	5
13,354	719	- 623	1,203	3,012	44	6
10,219	166	- 1,377	563	4,056	- 26	7
8,092	146	- 1,599	686	4,869	30	8
5,916	178	- 1,729	527	4,080	36	9
4,023	174	- 1,373	370	3,763	42	10
2,722	263	- 1,376	208	4,301	19	11
2,336	- 134	- 1,319	16	4,630	- 7	12
- 596	- 993	- 2,101	- 786	3,205	- 79	13
<b>104,669</b>	<b>4,674</b>	<b>- 11,326</b>	<b>10,401</b>	<b>43,171</b>	<b>469</b>	<b>14</b>
5,400	573	288	1,142	1,276	13	15
4,785	532	220	1,057	895	-	16
11,242	1,081	360	1,561	2,251	25	17
23,438	2,304	583	2,652	5,529	85	18
14,395	1,076	324	1,784	4,221	55	19
9,571	392	- 300	1,015	3,403	40	20
7,408	59	- 1,095	668	3,890	17	21
7,340	188	- 1,240	724	4,311	30	22
6,653	103	- 1,383	405	4,530	21	23
4,101	- 44	- 1,312	48	4,068	20	24
2,075	- 360	- 1,536	- 233	4,041	8	25
1,255	- 809	- 1,627	- 546	3,260	- 10	26
- 1,463	- 1,370	- 2,160	- 900	3,039	- 16	27
<b>96,200</b>	<b>3,725</b>	<b>- 8,873</b>	<b>9,377</b>	<b>44,714</b>	<b>288</b>	<b>28</b>

INTERNAL MIGRATION IN CANADA

**Table 3.12 – Net Intercensal Migration of Foreign Born Aged 10 and Over, by Sex and Age Group, 1931- 1941, 1941- 1951 and 1951- 1961 – concluded**

No.	Sex and age group	Net migration					
		Canada total	Nfld.	P.E.L.	N.S.	N.B.	Que.
		1951 - 1961					
	<b>Males</b>	No.	No.	No.	No.	No.	No.
1	10-14 .....	57,190	116	41	512	209	9,124
2	15-19 .....	35,982	26	19	428	117	5,550
3	20-24 .....	54,358	107	33	558	158	9,197
4	25-29 .....	89,547	193	37	642	358	15,243
5	30-34 .....	97,585	281	20	648	401	17,733
6	35-39 .....	69,655	187	- 15	483	217	12,495
7	40-44 .....	42,228	91	- 14	247	125	7,318
8	45-49 .....	32,298	40	1	136	133	5,710
9	50-54 .....	20,433	53	- 3	91	22	4,341
10	55-59 .....	10,149	- 21	- 4	- 4	- 21	2,138
11	60-64 .....	6,573	63	41	38	81	994
12	65-69 .....	1,973	- 6	19	56	33	- 320
13	70+ .....	15,831	4	14	- 29	62	801
14	<b>Totals, males .....</b>	<b>533,802</b>	<b>1,134</b>	<b>189</b>	<b>3,806</b>	<b>1,895</b>	<b>90,324</b>
	<b>Females</b>						
15	10-14 .....	53,068	151	40	450	254	8,465
16	15-19 .....	33,177	52	- 10	276	54	5,456
17	20-24 .....	58,774	111	43	529	284	11,104
18	25-29 .....	80,900	197	47	635	330	14,169
19	30-34 .....	79,484	258	50	660	327	13,723
20	35-39 .....	57,181	125	- 34	189	99	9,626
21	40-44 .....	33,510	44	- 12	206	100	5,429
22	45-49 .....	26,881	64	16	157	68	4,134
23	50-54 .....	16,767	7	0	- 44	7	3,684
24	55-59 .....	10,143	4	15	10	4	1,475
25	60-64 .....	6,557	18	9	13	- 8	1,118
26	65-69 .....	2,865	- 16	0	- 19	- 42	460
27	70+ .....	18,796	27	14	101	125	1,692
28	<b>Totals, females .....</b>	<b>478,103</b>	<b>1,042</b>	<b>178</b>	<b>3,163</b>	<b>1,602</b>	<b>80,535</b>

SOURCE: Estimated as explained in Section 3.6.

*ESTIMATES OF MIGRATION OF THE FOREIGN BORN*

**Table 3.12 – Net Intercensal Migration of Foreign Born Aged 10 and Over, by Sex and Age Group, 1931- 1941, 1941- 1951 and 1951- 1961 – concluded**

Net migration						No.
Ont.	Man.	Sask.	Alta.	B. C.	Y. T. and N. W. T.	
1951- 1961						
No.	No.	No.	No.	No.	No.	
32,825	2,114	823	4,336	7,037	53	1
20,640	1,319	388	2,920	4,529	46	2
29,330	2,425	1,084	4,859	6,310	297	3
47,949	3,551	1,649	7,556	11,874	495	4
52,493	3,206	1,662	8,060	12,685	396	5
38,994	2,141	746	5,171	9,063	173	6
24,032	1,119	320	3,135	5,775	80	7
18,205	891	206	2,396	4,541	39	8
11,160	461	- 430	1,576	3,147	15	9
5,286	97	- 254	915	2,030	- 13	10
2,838	79	- 133	785	1,818	- 31	11
1,005	- 255	- 434	56	1,865	- 46	12
4,098	749	1,584	2,650	5,940	- 42	13
<b>288,855</b>	<b>17,897</b>	<b>7,211</b>	<b>44,415</b>	<b>76,614</b>	<b>1,462</b>	<b>14</b>
30,570	2,034	741	4,111	6,199	53	15
19,336	1,084	323	2,524	4,045	37	16
32,799	2,063	831	4,505	6,405	100	17
45,905	2,656	1,170	6,180	9,445	166	18
45,575	2,484	1,087	5,940	9,224	156	19
34,136	1,380	251	4,240	7,077	92	20
19,881	961	255	1,644	4,961	41	21
14,715	653	141	2,962	3,939	32	22
9,423	90	- 352	1,216	2,708	28	23
6,124	- 64	- 515	790	2,276	24	24
3,480	- 186	- 560	811	1,863	- 1	25
2,076	- 629	- 815	60	1,799	- 9	26
7,658	628	529	2,121	5,916	- 15	27
<b>271,678</b>	<b>13,154</b>	<b>3,086</b>	<b>37,104</b>	<b>65,857</b>	<b>704</b>	<b>28</b>

### 3.7 COMPARISON OF DECADE INTERPROVINCIAL MIGRATION ESTIMATES PREPARED FOR THIS AND OTHER STUDIES

Interprovincial migration estimates for the three decades under consideration have been prepared by other scholars for the analysis of internal migration in Canada. Although not strictly comparable because of the lack of uniformity in procedure of estimation, it may be instructive to point out just how much the estimates in the present study differ from those in other studies, to indicate the extent of the differences and suggest some explanations for them.

Table 3.13 summarizes the various interprovincial migration estimates for the decades 1931-1941, 1941-1951, and 1951-1961, the comparison being made only for total decade net migration for each province and not by sex and age. The estimates with which comparison is made here are those prepared by Keyfitz (1950, Table 5), Buckley (1960, Tables 3 and 4), Farrar (1962, Tables II-1 and III-1), Sinclair (1966, pp. 300, 301 and 308, 309), Anderson (1966, Table A-13) and the decade estimates derived from the migration data collected in the 1941 Census (DBS, *Census of Canada*, 1941, Vol. IV, Table 42). To facilitate the comparison, combined and separate sets of net migration estimates of the Canadian born and foreign born for all ages and for age 10 and over are given in Table 3.13.

Explanation of the differences between the various sets of estimates warrants some comments on the methodology used. The migration estimates by Keyfitz were for the total population aged 10 and over and were obtained by the life table survival ratio technique. The survival ratios used were the average national life table survival ratios for 1931-1941 on the assumption of uniform mortality level and pattern throughout Canada.

Buckley made two series of estimates—estimates of the Canadian born and estimates of the Canadian born adjusted for the in-migration of persons born outside Canada. The latter series was mainly for comparing his estimates with those by Keyfitz. Of these, only the former series is presented in Table 3.13. The figures were obtained simply by subtracting the life-time net migration of the Canadian born (i.e., the birth residence index) in the first census from the corresponding life-time net migration in the second census without taking into account the effect of mortality. The estimates of the Canadian born by Farrar were made by the same method used by Buckley; hence both sets of estimates of the Canadian born agree. The other series of migration estimates by Farrar is for the total population obtained by the vital statistics method (i.e., by subtracting the intercensal natural increase of population from the total increase during the same period). These estimates are actually prepared by the DBS (*Canada Year Book*, 1956, p. 152). The latter series includes the former and takes into account the emigration of the Canadian born and net migration of the foreign born.

The estimates by Sinclair were by the census survival ratio method, using the forward census survival ratios of the total population (calculated on the assumption that provinces experienced similar rates of emigration to foreign countries) for estimating migration of the Canadian born and foreign born aged 10 and over. In applying the census survival ratios, no adjustment was made for mortality differences among the provinces nor for the mortality differences of the Canadian-born and foreign-born populations. Anderson's estimates are similar to those by Farrar using the vital statistics method, although the estimates by Farrar are for the intercensal periods and those by Anderson are for the 10-year calendar-year periods. The estimates for 1931-1941 derived from the migration statistics collected in the 1941 Census relate to internal migration proper of the total population, i.e., the Canadian-born and the foreign-born populations.

If birth registration is complete, the net migration estimates by the vital statistics method are likely to be the most reliable of the sets of estimates presented in Table 3.13. This generalization is probably valid for the 1951-1961 estimates because registration of births in Canada is believed to be complete since 1945 when the family allowance scheme was introduced. The available information on the completeness of birth registration indicates varying amount of under-registration of births before 1951. According to sample surveys in 1931 and 1941, estimates of under-registration of births were six per cent and three per cent, respectively. The investigations also showed rather wide differences among the provinces (Charles, 1948, p. 14; Tracey, 1931, pp. 231-236; and Ryder, 1954, Table 2). The under-registration of births in 1931 and 1941 may account for part of the greater difference between the migration estimates in the present study and those by the vital statistics method. The possible errors in the conversion of calendar-year statistics into census-year statistics may also lead to errors in the estimation of intercensal net migration by the vital statistics method. Also, the difference in the net underenumeration in the consecutive censuses will have its full impact in the estimates of migration by the vital statistics method. The available evidence indicates that underenumeration in the censuses had not been uniform in Canada, and the amount of underenumeration, instead of decreasing from census to census, increased between 1951 and 1961 (Chapter Two). Hamilton (1966, pp. 393-515) derived a mathematical explanation that not only explains why the CSR estimates of net migration are usually lower than the vital statistics estimates but also shows that the CSR estimates will usually be closer to the "true" amount of net migration determined by using a "true" vital statistics method that assumes perfect enumeration of population at both censuses (1950 and 1960), perfect registration of births and deaths, and no mis-statement of age, sex or nativity status.

## INTERNAL MIGRATION IN CANADA

**Table 3.13 – Comparison of Decade Interprovincial Net Migration Estimates in the Present Study with the Estimates in Other Studies, 1931 - 1941, 1941 - 1951 and 1951 - 1961**

No.	Province or territory	Census of Canada, 1941	Buckley	Keyfitz	Farrar	
			Canadian born	Age 10 +	Total net migration	Canadian born
1 2 3 4 5 6 7 8 9 10	P.E.I. .... N.S. .... N.B. .... Que. .... Ont. .... Man. .... Sask. .... Alta. .... B.C. .... Y.T. and N.W.T. ....	1931 - 1941				
		'000	'000	'000	'000	'000
		- 3.1	- 1.3	- 2	- 3	- 1
		1.4	4.8	2	8	5
		- 7.7	- 7.0	- 13	- 10	- 7
		1.7	26.3	- 32	- 2	26
		68.3	100.3	75	77	100
		- 30.1	- 33.8	- 41	- 48	- 34
		- 103.8	- 111.0	- 138	- 158	- 111
		- 24.0	- 29.9	- 35	- 42	- 30
96.8	51.3	72	82	51		
..	0.3	0	1	b		
11 12 13 14 15 16 17 18 19 20 21	Nfld. .... P.E.I. .... N.S. .... N.B. .... Que. .... Ont. .... Man. .... Sask. .... Alta. .... B.C. .... Y.T. and N.W.T. ....	Buckley	Farrar		Sinclair	
		Canadian born	Total net migration	Canadian born	Canadian born age 10 and over	Foreign born age 10 and over
		1941 - 1951				
		'000	'000	'000	'000	'000
		-	-	-	-	-
		- 5.6	- 12	- 6	- 9.8	- 0.7
		- 27.4	- 39	- 27	- 30.3	- 6.5
		- 28.8	- 42	- 29	- 31.3	- 5.6
		- 10.8	- 12	- 11	- 3.5	- 12.3
		154.3	305	154	116.2	76.0
		- 57.5	- 61	- 57	- 45.0	- 19.0
- 150.7	- 199	- 151	- 132.7	- 52.1		
- 9.4	- 7	- 9	- 4.1	- 23.6		
131.7	231	132	135.3	46.4		
4.2	5	4	2.4	0.5		

<sup>a</sup> For Anderson the decades are 1931 - 1940, 1941 - 1950 and 1951 - 1960.

<sup>b</sup> Less than 501.

SOURCE: See Chapter Three.

## COMPARISON OF DECADE MIGRATION ESTIMATES

**Table 3.13 – Comparison of Decade Interprovincial Net Migration Estimates in the Present Study with the Estimates in Other Studies, 1931 - 1941, 1941 - 1951 and 1951 - 1961**

Sinclair		Anderson <sup>a</sup>	Present study				No.
Canadian born age 10 and over	Foreign born age 10 and over	Total net migration	Canadian born age 10 and over	Foreign born age 10 and over	Total Canadian born	Canadian born and foreign born	
1931 - 1941							
'000	'000	'000	'000	'000	'000	'000	
- 2.5	- 0.2	- 2.6	- 2.3	- 0.1	- 2.5	- 2.6	1
0.6	2.8	4.2	1.7	2.7	2.1	5.7	2
- 9.3	- 2.5	- 10.8	- 6.0	- 1.8	- 6.6	- 7.9	3
- 6.2	- 1.6	- 1.8	26.9	- 5.3	27.4	24.3	4
81.4	26.8	79.5	70.3	13.7	77.4	96.9	5
- 20.0	- 10.2	- 43.8	- 21.9	- 14.4	- 24.3	- 37.8	6
- 84.9	- 38.0	- 148.7	- 84.7	- 45.4	- 95.7	- 140.5	7
- 13.2	- 9.9	- 34.5	- 17.3	- 16.8	- 20.5	- 36.3	8
54.6	31.8	85.7	51.5	27.0	60.5	89.1	9
- 0.2	0.4	..	0.6	0.5	1.0	1.5	10
Present study					Anderson <sup>a</sup>	Present study	
Total net migration	Canadian born age 10 and over	Foreign born age 10 and over	Total Canadian born	Canadian born and foreign born	Total net migration	Canadian born and foreign born	
1941 - 1951					1951 - 1961		
'000	'000	'000	'000	'000	'000	'000	
-	-	-	-	-	- 13.0	- 11.9	11
- 13.6	- 8.4	0.2	- 8.7	- 8.3	- 10.6	- 9.8	12
- 37.0	- 32.1	- 7.5	- 37.7	- 43.7	- 35.5	- 31.7	13
- 40.1	- 29.2	0.6	- 33.4	- 31.1	- 39.3	- 27.2	14
- 17.1	- 32.5	31.0	- 34.5	6.0	198.5	168.3	15
270.1	71.6	200.9	83.0	320.7	701.8	665.3	16
- 65.5	- 46.9	8.4	- 53.3	- 41.0	- 5.7	- 0.4	17
- 202.2	- 128.5	- 20.2	- 138.8	- 156.6	- 83.1	- 70.0	18
- 15.2	- 6.2	19.8	- 4.1	22.4	125.9	124.3	19
224.7	123.8	87.9	137.5	234.0	244.1	223.3	20
..	2.4	0.8	2.9	3.7	..	3.0	21

The intercensal estimates of net migration of the total population by the vital statistics method have been taken as the "standard" for the comparison attempted here. Assuming that the estimates by the vital statistics method are correct, three factors may be plausible explanations of the difference between the intercensal estimates by the vital statistics method and the migration estimates of the total population in the present study. They are: (1) the errors in the province-of-birth by residence data, the mis-reporting of age, and the limitations in the adjustment of the data to obtain the required in-born population for the application of the place-of-birth survival ratio method; (2) the separate estimation of net migration of the Canadian born and foreign born and the possible cumulative effect of errors in the two estimates by the survival ratio method; and (3) the possible errors in the estimation of migration of the foreign born by the application of national census survival ratios adjusted for the estimated mortality differences between the Canadian born and the foreign born without adjusting for mortality differences among the provinces.

The estimates of total net migration in the present study for 1951-1961 are fairly close to the amounts and directions of estimates by Anderson for the period 1951-1960; the existing small differences can be partly attributed to the slight difference in the time period. For the other two decades there are substantial differences between the two estimates for some provinces, both in amounts and direction.<sup>14</sup> According to the two estimates for 1931-1941, only Quebec had net migration with different signs. For the period 1941-1951, Alberta and Quebec had net migration with different signs. In most provinces for both periods, the estimates in the present study are higher for net in-migration and lower for net out-migration than the estimates by the vital statistics method. Only the estimates by Sinclair provide separate migration estimates of the Canadian born and foreign born for 1931-1941 and 1941-1951. Apart from the difference in the methodology used by Sinclair and that used in the present study, another factor that accounts for differences between the two sets of estimates is that Sinclair's estimates of Canadian born and foreign born refer to the net internal migration of the two groups but the corresponding estimates in the present study include net external migration as well. This point has to be kept in mind when comparing Sinclair's estimates with those in the present study.

It cannot be said with certainty which of the estimates (those by the vital statistics method or those in the present study) are nearer to the truth. If there is every indication that the estimates by the vital statistics method are better estimates of net migration for the total of all ages than the sum of estimates for the separate age groups by another method, then the estimates for each age group could be improved by adjusting the distribution by age to sum the total derived independently by the vital statistics

method.<sup>15</sup> Because the estimates in the present study are made for Canadian born and foreign born separately, and because the assumption that the estimates by the vital statistics method are more reliable than other estimates is debatable, it was decided not to adjust the estimates in the present study. As noted earlier, the limitation of the vital statistics method is that any increase or decrease in the amount of net census undercount from one census to the next is combined with net migration in this method.

### **3.8 ESTIMATES OF MIGRATION FROM SAMPLE MIGRATION DATA, 1956-1961**

Migration estimates were also derived for 1956-1961 from the sample migration data (20-per-cent sample) collected with the 1961 Census. From the sample data (details of the data and evaluation are given in Chapter Two), it is possible to get information on interprovincial and intraprovincial migrants among persons aged five and over by sex, age and type of residence (urban, rural non-farm and rural farm in 1956) between 1956 and 1961; regardless of the number of moves made, a person is counted not more than once as a mover. It may be expected that the five-year period of migration should give a more representative picture of mobility pattern than the 10-year estimates. It is also possible that the last five years of the 1951-1961 decade had a somewhat different mobility history than the first five years.

As mentioned in Chapter Two, several types of migration estimates can be derived from these data for 1956-1961. The principal types are: (1) interregional migration; (2) interprovincial migration; (3) intraprovincial migration, and (4) intramunicipal migration or local movement. These estimates can also be derived for movements between rural and urban residence. The principal set of estimates derived was the in-, out- and net migration series by age and sex for each province between 1956 and 1961. This is presented in Appendix Table A.3.

### **3.9 ESTIMATES OF INTERPROVINCIAL MIGRATION FROM 1941 CENSUS DATA**

As stated in Chapter Two, migration data were collected in the 1941 Census by asking two questions on previous place of residence and duration of continuous residence at place of enumeration. The answers to those two questions provided data that could be used to derive interprovincial estimates of migration for different periods during 1931-1941. By straightforward addition and subtraction, in-, out- and net interprovincial migration estimates were derived and these estimates have been used for analysis wherever they were found to be appropriate.

## FOOTNOTES TO CHAPTER THREE

<sup>1</sup> In the 1956 and 1966 Censuses, questions were confined to the basic characteristics of the population such as sex, age and marital status.

<sup>2</sup> Many of the notations used in the present study are those used by Zachariah (1964, C. III) and George (1965, C. III).

<sup>3</sup> According to Everett Lee (1957, p. 57), the term "birth residence index" was first used by C. Warren Thornthwaite.

<sup>4</sup> For example, Buckley's estimates of intercensal migration using the place-of-birth data were not corrected for the effect of mortality (Buckley, 1962, Table 3). Sinclair (1966, p. 23) states, "Generally speaking, however, it is not possible to obtain age and sex breakdowns of migrants by this method, nor does it indicate the amount and direction of internal migration of the foreign-born population. Moreover, the birth-residence technique of migration estimation is not itself free from the bias caused by "deaths among migrants".

<sup>5</sup> The use of the terms "in-born" (i.e., those persons born in a province, including both those residing in the province and those residing elsewhere at each census date) and "out-born" (i.e., those persons born elsewhere, but within the country, and residing in a province) does not strictly conform to acceptable grammar. However, because of difficulty in finding better terms, they are used here for convenience. Two sets of alternative terms were considered: (1) native born and non-native born, and (2) in-province born and out-of-province born. The first set is likely to be confused with the "Canadian-born" and "foreign-born" populations; the second, although a little more specific, has the same basic limitation as the terms used here. Further, the terms "in-born" and "out-born" have already been used by Eldridge in measuring interstate migration in the United States for 1950-1960 from data on state of birth by residence (Eldridge, 1965<sup>a</sup>, Eldridge and Kim, 1968).

<sup>6</sup> For details of the basic methodology, also see Hope T. Eldridge, 1965<sup>a</sup>, pp. 221-225, and Hope T. Eldridge and Yum Kim, 1968.

<sup>7</sup> United Nations, *Demographic Yearbooks*, 1963 and 1964, Tables 7 and 28. It may be noted that the number of Canadian born outside Canada given in the *Demographic Yearbook* does not cover all such persons. Where figures for Canada are lumped together with America, they are excluded in the calculation made here.

<sup>8</sup> The age data for 1930 and 1960 were available as follows: 1930 Census, under 15, 15-24, 25-44, 45-64 and 65 and over; 1960 Census, under 15, and 10-year age groups over age 15.

<sup>9</sup> Alternative methods tried were: (1) application of the 1950 percentage age distributions of the Canadian born in the United States for estimating the missing age groups for other years; (2) application of the age distributions of the Canadian born enumerated in the United Kingdom censuses for estimating the missing age groups of the Canadian born in the United States; (3) expected age distributions of the Canadian born in the United States in 1960 obtained by applying either the relevant United States or Canadian life table 10-year survival ratios to the five-year age distributions in 1950; (4) the five-year age distributions of the foreign-white population in the United States born of Canadian parentage; and (5) interpolation by mathematical methods. The five-year age distributions of the foreign-white population born of Canadian parentage in the United States were available for 1940 on a five-per-cent sample basis. However, these data were not used to distribute the Canadian-born population enumerated in the United States in 1940 because they did not represent the age distributions of the Canadian-born population in the United States. Since this population contained those born in the United States of Canadian parentage as well, the population was much younger than the Canadian-born migrants to the United States. This is evident from a comparison of similar distributions in 1960 with the age distributions of the Canadian-born population enumerated in the United States in the same year. Although the percentage of the Canadian-born males under 15 years of age was 8.1, the corresponding percentage of those born of Canadian parentage was 21.9. The median ages of the Canadian-born population in the United States in 1960 and the population born of Canadian parentage in the United States in 1960 were 50.4 years and 37.7 years, respectively.

In a study by Truesdell, the broad age groups of the Canadian-born population enumerated in the U.S. Census in 1930 has been separated into five-year age groups on the basis of the single-year age data from a special tabulation of 12 states, aggregating 624,649 (or 48.9 per cent of the total number of Canadian-born white in the United States). The author came to know about this data at a late stage of completion of the present study. However, a comparison of the age distribution used here for 1930 and the estimated age distribution by Truesdell (1943, Tables 51 and 52) showed only slight variations between the two distributions except in the age group 45-49.

<sup>10</sup> The validity of the distribution of population of non-French origin on the basis of the corresponding population size of each province may be questioned. There is no empirical evidence to prove or disprove the validity of the prorata distribution used here. However, the analysis of the flow of in- and out-migration among the provinces on the basis of the 1961 Census migration data indicated a positive relationship between in- and out-migration rates. Kasahara also observed a similar association. "Although the areas of rapid industrial expansion and favourable economic opportunities attracted a large number of migrants from outside, each of them was also an important supply area of migrants. Well over 20 per cent of the nation's migrant population each year originated from Ontario, while the contribution by Quebec, Alberta and British Columbia to other provinces each exceeded 10 per cent of the total migrant population" (Kasahara, 1963, p. 27). Such an "intrinsic relationship" between in- and out-migration rates for an area was also observed by Shryock in the study of mobility within the United States (for details, see Chapter Five, Section 5.4.2).

<sup>11</sup> The census data on place of birth by residence by five-year age groups are not published for all the years under consideration, but are available in unpublished form in the Census Division of DBS.

<sup>12</sup> Such a procedure has been used by the author in his study where the data are not tabulated by age (George, 1965, pp. 85-89). Burch (1962) and Elizaga (1965, pp. 76-106) have used the same procedure in their study, even though the data are available by age.

<sup>13</sup> Thanks are due to H.G. Page, Chief, Vital Statistics Section, DBS, for providing the unpublished death statistics by place of birth for 1941-1951.

<sup>14</sup> In a recent study for the United States, 1950-1960, substantial differences between the estimates by the vital statistics method and census survival ratio method were observed (Eldridge, 1965<sup>a</sup>, pp. 82-99).

<sup>15</sup> Such a procedure was used in a recent study by the U.S. Census Bureau (U.S. Department of Commerce, *Current Population Reports*, Series P. 23, No. 15, 1965).



## *Chapter Four*

# **POPULATION GROWTH AND REDISTRIBUTION**

The aim of this chapter is to analyse briefly the growth and redistribution of population in Canada during 1901-1961. Redistribution of population here refers to "net redistribution" which measures the population as of the end of a period that would have to be reshuffled among the provinces to regain the distribution held at the beginning of the period. Because estimates of intercensal net migration for the provinces have not been prepared prior to 1931, the analysis of the separate role of migration and natural increase on population growth and redistribution is confined to 1931-1961. The total census population counts and the migration estimates made in Chapter Three are the main data used for this analysis.

### **4.1 GROWTH OF CANADA'S POPULATION AS A WHOLE**

As Canada is an immigrant country, the population has grown at a very uneven pace. In the mid-nineteenth century, Canada was as yet a largely unexplored wilderness with pockets of population struggling against inclement nature to establish an essentially agrarian economy. The total population (excluding Newfoundland) was only 2,436,297 in 1851 as against 5,371,315 in 1901, 10,376,786 in 1931 and 18,238,247 (including Newfoundland) in 1961 (1951 Census, Vol. X, p. 11; 1961 Census, Vol. VII, Bul. 7.1-1, p. 2). Thus, although the total increase of population between 1851 and 1901 was only 2,935,018, the increase during 1901-1961 (excluding Newfoundland) was 12,409,079—over four times the increase during the preceding period. In terms of rates, the population growth between 1901 and 1961 was 231.0 per cent or 23 per cent per decade; the highest rate of 34.2 per cent occurred during the 1901-1911 decade (Table 4.1), when there was a marked upturn in immigration and 1,644,147 persons entered the country. Since that phenomenal increase during 1901-1911, the intercensal rate of increase dropped during each successive decade. The lowest rate of 10.9 per cent occurred during 1931-1941 when the great economic depression and World War II had their effect on population growth; in that decade the marked reduction in the number of immigrants entering the country, and the

reduction in the birth rate may be attributed to the influence of depression and war. After 1941, the population registered an accelerated growth, reaching a near-record rate of increase of 30.2 per cent in 1951-1961. This was nearly three times the rate of increase in 1931-1941 and almost double the absolute increase of population in 1941-1951 (Table 4.1). It should be noted that part of the accelerated increase in population after 1941 was accounted for by the addition of Newfoundland in 1949.

## 4.2 GROWTH BY REGIONS AND PROVINCES

Intercensal rates of increase for the regions and provinces are presented in Table 4.1 and plotted in Chart 4.1 (for major regions). The data show substantial variation in the rates among the provinces for the different decades and over time. This is evident from the variations in the number of provinces with higher or lower growth rates compared with national rates in the different intercensal periods.

The size of the initial population and its effect on the growth rates must be kept in mind when attempting to explain the variations in the growth pattern. The variations in growth rates noted in Table 4.1 are in some degree related to population size, particularly in the early decades. This is evident from the abnormally high growth rates for the provinces of Western Canada in 1901-1911 and the subsequent periods up to 1931. "More than half the total increase of 1,835,328 in Canada's population during the decade, 1901-1911, took place in the West, where a gain of 1,090,103 or 168.9 per cent from 645,517 to 1,735,620 was recorded" (1951 Census, Vol. X, p. 20). To understand the general relationship between initial population size and intercensal rates of increase of population, rank correlations were calculated for the periods 1901-1931 and 1931-1961. The results show that only for the decades 1901-1911 and 1931-1941 was there some inverse relationship between population size and growth rates. The correlation coefficient between population size in 1901 and growth rate in 1901-1911 was only -0.08. The corresponding correlation coefficient for 1931-1941 was -0.31. The high growth rates in the Yukon and the Northwest Territories were mainly responsible for the small negative relationship in 1931-1941, and the high growth rates in the western provinces were responsible for the insignificant negative relationship in 1901-1911. Prince Edward Island had decelerated declining growth rates between 1901 and 1931, Saskatchewan had a declining rate during 1931-1941 and 1941-1951, and Yukon Territory and the Northwest Territories had declining rates during 1901-1911 and 1911-1921.

**Table 4.1 – Total Population and Percentage Change over Preceding Census,  
by Region and Province, 1901-1961**

Region, province or territory	1901	1911	1921	1931	1941	1951	1961
	Population						
	No.	No.	No.	No.	No.	No.	No.
Atlantic Provinces .....	893,953	937,955	1,000,328	1,009,103	1,130,410	1,618,126	1,897,425
Newfoundland .....	...	...	...	...	...	361,416	457,853
Prince Edward Island .....	103,259	93,728	88,615	88,038	95,047	98,429	104,629
Nova Scotia .....	459,574	492,338	523,837	512,846	577,962	642,584	737,007
New Brunswick .....	331,120	351,889	387,876	408,219	457,401	515,697	597,936
Quebec .....	1,648,898	2,005,776	2,360,510	2,874,662	3,331,882	4,055,681	5,259,211
Ontario .....	2,182,947	2,527,292	2,933,662	3,431,683	3,787,655	4,597,542	6,236,092
Prairie Provinces .....	419,512	1,328,121	1,956,082	2,353,529	2,421,905	2,547,770	3,178,811
Manitoba .....	255,211	461,394	610,118	700,139	729,744	776,541	921,686
Saskatchewan .....	91,279	492,432	757,510	921,785	895,992	831,728	925,181
Alberta .....	73,022	374,295	588,454	731,605	796,169	939,501	1,331,944
British Columbia .....	178,657	392,480	524,582	694,263	817,861	1,165,210	1,629,082
Yukon and Northwest Territories ...	47,348	15,019	12,300	13,546	16,942	25,100	37,626
<b>Canada .....</b>	<b>5,371,315</b>	<b>7,206,643</b>	<b>8,787,949<sup>a</sup></b>	<b>10,376,786</b>	<b>11,506,655</b>	<b>14,009,429</b>	<b>18,238,247</b>

For footnotes see end of table.

Table 4.1 - Total Population and Percentage Change over Preceding Census,  
by Region and Province, 1901-1961 - concluded

Region, province or territory	1901	1911	1921	1931	1941	1951	1961
	Percentage change over preceding census						
Atlantic Provinces .....		4.9	6.6	0.9	12.0	43.1	17.3
Newfoundland .....		...	...	...	...	...	26.7
Prince Edward Island .....		- 9.2	- 5.5	- 0.7	8.0	3.6	6.3
Nova Scotia .....		7.1	6.4	- 2.1	12.7	11.2	14.7
New Brunswick .....		6.3	10.2	5.2	12.0	12.7	15.9
Quebec .....		21.6	17.7	21.8	15.9	21.7	29.7
Ontario .....		15.8	16.1	17.0	10.4	21.4	35.6
Prairie Provinces .....		216.6	47.3	20.3	2.9	5.2	24.8
Manitoba .....		80.8	32.2	14.8	4.2	6.4	18.7
Saskatchewan .....		439.5	53.8	21.7	- 2.8	- 7.2	11.2
Alberta .....		412.6	57.2	24.3	8.8	18.0	41.8
British Columbia .....		119.7	33.7	32.3	17.8	42.5	39.8
Yukon and Northwest Territories ....		- 68.3	- 18.1	10.1	25.1	48.1	49.9
Canada .....		34.2	21.9	18.1	10.9	21.8 <sup>b</sup>	30.2

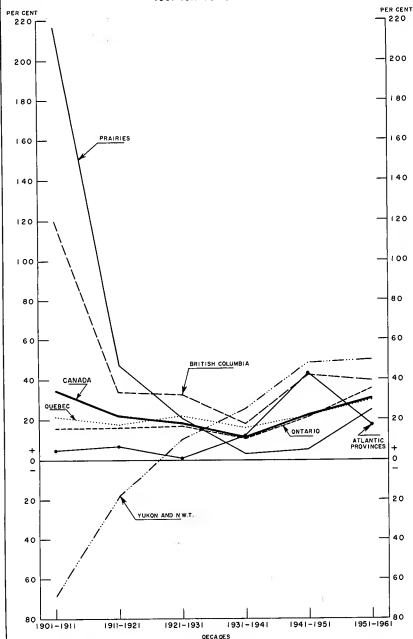
<sup>a</sup> Includes 485 persons in the Royal Canadian Navy whose province of residence was not known.

<sup>b</sup> Including Newfoundland in 1951 but not in 1941; excluding Newfoundland, the 1951 rate was 18.6 per cent.

SOURCE: 1961 Census, Bul. 7.1-1, *General Review*, p. 2.

CHART 4.1

PERCENTAGE CHANGE IN POPULATION, FOR CANADA AND MAJOR REGIONS,  
1901-1911 TO 1951-1961



Source: Table 4.1

## INTERNAL MIGRATION IN CANADA

It appears that the rapid growth of population in the early decades in Western Canada, with its emptiness of the areas and its potential for exploitation, brought about a convergence in the growth rates in the later decades. This may be seen from the following data which give the highest and lowest ranking provinces for each decade (excluding the Yukon and Northwest Territories) along with the respective rates of increase.

<u>Period</u>	<u>Highest rate of increase</u>		<u>Lowest rate of increase</u>	
	<u>Province</u>	<u>Rate</u>	<u>Province</u>	<u>Rate</u>
1901 - 1911.....	Sask.	439.5	P.E.I.	-9.2
1911 - 1921.....	Alta.	57.2	P.E.I.	-5.5
1921 - 1931.....	B.C.	32.3	N.S.	-2.1
1931 - 1941.....	B.C.	17.8	Sask.	-2.8
1941 - 1951.....	B.C.	42.5	Sask.	-7.2
1951 - 1961.....	Alta.	41.8	P.E.I.	6.3

These data suggest that the convergence of the growth rate in the later decades was mainly due to slower population growth in the initially most rapidly growing western provinces rather than to more rapid growth among the provinces with lower growth rates. Saskatchewan and Alberta, with a base population in 1901 of only 91,279 and 73,022, respectively, had a growth rate of over 400 per cent in 1901-1911, which, however, declined to about 50 per cent in the next decade. Thereafter the highest rate of increase never exceeded 42.5 per cent in any province. One notable fact about Canada's population growth was that the western provinces maintained first place in growth rates during the whole period 1901-1961. As will be seen later, in addition to natural increase, both internal migration and immigration played an important role in the high growth rates in Western Canada.

### 4.3 REDISTRIBUTION OF TOTAL POPULATION

The effects of the variations in population growth rates can be seen in the changing distribution of population among the provinces, given for 1901-1961 in Table 4.2 and Chart 4.2.

The distribution of population shows that Ontario and Quebec are the most populous provinces or regions of Canada, containing 71.4 per cent of the total population in 1901 and 63.0 per cent in 1961. The heavy concentration in these two provinces dropped by about eight percentage points between 1901 and 1911; thereafter they maintained a fairly constant share of about 60 per cent up to 1951, and between 1951 and 1961 it increased from 61.8 to 63.0 per cent. Because Quebec registered a decline in its

# REDISTRIBUTION OF TOTAL POPULATION

population share in 1961, the observed increase for the two provinces together between 1951 and 1961 was solely due to the increase in the share of Ontario's population from 32.8 per cent to 34.2 per cent.

**Table 4.2 – Percentage Distribution of Population, by Province, 1901-1961**

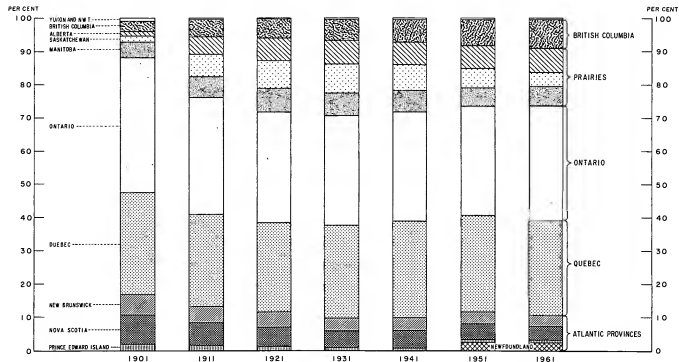
Province or territory	1901	1911	1921	1931	1941	1951	1961
Newfoundland .....	...	...	...	...	...	2.58	2.51
Prince Edward Island ...	1.92	1.30	1.01	0.85	0.83	0.70	0.57
Nova Scotia .....	8.55	6.83	5.96	4.94	5.02	4.59	4.04
New Brunswick .....	6.16	4.88	4.41	3.93	3.98	3.68	3.28
Quebec .....	30.70	27.83	26.86	27.71	28.95	28.95	28.84
Ontario .....	40.65	35.08	33.39	33.07	32.91	32.81	34.20
Manitoba .....	4.75	6.40	6.94	6.75	6.34	5.54	5.05
Saskatchewan .....	1.70	6.83	8.62	8.88	7.79	5.94	5.07
Alberta .....	1.36	5.19	6.70	7.05	6.92	6.71	7.30
British Columbia .....	3.33	5.45	5.97	6.69	7.11	8.32	8.93
Yukon and Northwest Territories .....	0.88	0.21	0.14	0.13	0.15	0.18	0.21
<b>Canada .....</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

SOURCE: Derived from Table 4.1.

The Prairie Provinces gained most of the drop in the share of population in Ontario and Quebec between 1901 and 1911. In that decade, there was a spectacular rise in the proportion of the population in the four western provinces, from 11.1 per cent to 23.9 per cent; they continued to gain until 1931 when their share became 29.4 per cent, after which there was a slight fall caused mainly by a reduction in the percentages of population in Manitoba and Saskatchewan. British Columbia had a steady increase in its population share throughout the 1901-1961 period and Alberta, after a reduction in 1941 and 1951, had a gain in 1961. Thus, there was a westward shift in the population of Canada, particularly to British Columbia and Alberta. Unlike the other provinces, the Maritime Provinces experienced a steady decline in their share of population which declined from 16.6 per cent in 1901 to 9.7 per cent in 1931. A slight increase in the share of Nova Scotia and New Brunswick in 1941 moved the combined share of the Maritime Provinces up to 9.8 per cent in 1941 but it has continued to decrease since. The addition of Newfoundland in 1949 was mainly responsible for the increase in the share of the Atlantic Provinces in 1951.

CHART 4.2

## PERCENTAGE DISTRIBUTION OF POPULATION BY PROVINCES, CANADA, 1901-1961



Source: Table 4.2.

# REDISTRIBUTION OF TOTAL POPULATION

In order to see whether there is any pronounced change in the concentration of population over time with the increase in population growth, an index of concentration was calculated for each census. To calculate this index, the number of provinces (including the Yukon and Northwest Territories) in Canada was first divided into 100, which yielded two figures — 10.0 for the period 1901-1941 and 9.1 for the period after 1941 (including Newfoundland). These figures were then subtracted from the corresponding percentage of national population in each province and the positive differences for each census were summed. The value of the index would be zero if exactly equal numbers of persons were found in each province, and would reach its maximum value of 90.0 (with 10 provinces) if all the population of Canada were in one province (for further details, see Eldridge and Thomas, 1964, p. 26). The index thus obtained for each census is the percentage of the nation's population that would have to be redistributed to obtain equal numbers in all the provinces. The indices for Canada calculated for the period 1901 to 1961 are:

<u>1901</u>	<u>1911</u>	<u>1921</u>	<u>1931</u>	<u>1941</u>	<u>1951</u>	<u>1961</u>
51.2	43.0	40.3	40.9	42.0	43.4 (excl. Nfld.) 43.6 (incl. Nfld.)	44.8

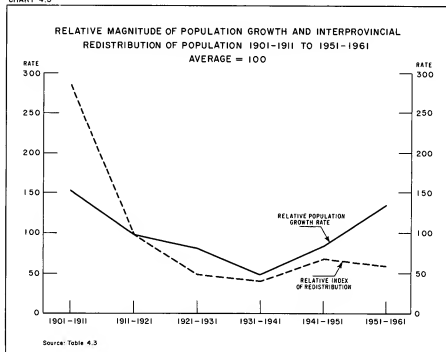
The indices show substantial reduction in the concentration of population in Canada between 1901 and 1921, which may be attributed to the phenomenal change in the growth of population in the western provinces in the early decades of the present century. In 1921, for example, it would have required the redistribution of 10.9 per cent of the total population to restore the degree of concentration that existed in 1901. Since 1921 there has been a steady increase in the concentration of population.

The net shift, or redistribution, occurring in the intercensal periods as a result of population growth, can be measured by computing a "redistribution coefficient" or a "redistribution index". The method consists of calculating the percentage change of the nation's population in each province at successive censuses (i.e., by taking the absolute differences between the percentage distributions of each province for successive censuses) and summing the plus or minus differences. Both sums should be equal, and either one is an index of interprovincial redistribution of population. This measure varies between the theoretical limits of zero and 100 per cent. The index shows the percentage of the nation's population at the end of the period that would have to be redistributed among the provinces to regain the distribution that held at the beginning of the period. It may be mentioned that this index or redistribution coefficient measures only net redistribution attributable to natural increase and to net migration, and not gross redistribution (for details, see Hoover, Jr., 1941, pp. 199-205; Eldridge and

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Thomas, 1964, pp. 28-31).<sup>1</sup> Table 4.3 gives the index and volume of interprovincial net redistribution obtained by this method for Canada, 1901-1961. The volume of redistribution is obtained by applying the percentage redistribution in each intercensal period to the respective population at the end of the intercensal period.

CHART 4.3



The index of redistribution given in Table 4.3 shows that, throughout most of the 60-year period, the rate of interprovincial redistribution has been downward. There was a continuous decline up to 1941, followed by an increase in the next period and a slight dip in the last period. The index was highest in 1901-1911 involving a redistribution of 917,444, and lowest in 1931-1941 involving a redistribution of 208,270. The highest index was about three times as high as the second highest index (in 1911-1921), and more than seven times as high as the lowest index (in 1931-1941). The main point to be noted about the redistribution index is that, except for 1951-1961, the pattern of change observed here is similar to the intercensal rate of change of the total population (Chart 4.3) which suggests the interrelation between national growth and internal redistribution. The different pattern in 1951-1961 may be attributed to the sudden influx of immigrants without a corresponding increase in internal redistribution.

## COMPONENTS OF POPULATION GROWTH AND REDISTRIBUTION

Because of the cumulative nature of the index in Table 4.3, if the same provinces had gained or lost population in all the intercensal periods, the sum of redistribution rates for the successive intercensal periods should equal the combined rate calculated independently for a corresponding long period. This is not true in the case of the amount of redistribution which is derived by using a changing population base. To examine this, values computed independently for longer periods were compared with values for the same periods obtained by adding up decade values. The comparison shows that the differences between the two values are small, indicating that, by and large, the same provinces had gained or lost population in Canada during the whole period under consideration.<sup>2</sup> Thus, the sums of the successive intercensal rates were 19.27 and 7.44 for 1901-1931 and 1931-1961, respectively; the rates for the same periods obtained independently were 18.23 and 6.87 (excluding Newfoundland in 1961).

Only the four western provinces gained from the amount of net redistribution of population during 1901-1931. During 1931-1961, the gainers were Ontario, Quebec, Alberta, British Columbia and the Yukon and Northwest Territories (Newfoundland was not considered).

**Table 4.3 – Index of Interprovincial Net Redistribution of Population, 1901-1911 to 1951-1961**

Period	Percentage increase in population	Index of redistribution	Amount of redistribution	Relative population increase (Average = 100)	Relative redistribution (Average = 100)
	p.c.	p.c.	No.	p.c.	p.c.
1901-11 .....	34.2	12.73	917,444	153.4	286.1
1911-21 .....	21.9	4.36	383,133	98.2	98.0
1921-31 .....	18.1	2.18	226,214	81.2	49.0
1931-41 .....	10.9	1.81	208,270	48.9	40.7
1941-51 <sup>a</sup> .....	18.6	3.01	410,805	83.4	67.6
1951-61 .....	30.2	2.62	477,842	135.4	58.9
<b>Average ...</b>	<b>22.3</b>	<b>4.45</b>	<b>...</b>	<b>100.0</b>	<b>100.0</b>

<sup>a</sup> Excluding Newfoundland; the percentage increase in population including Newfoundland in 1951 was 21.8.

SOURCE: Computed from Table 4.2 as explained in the text.

#### 4.4 COMPONENTS OF POPULATION GROWTH AND REDISTRIBUTION

The object of this section is to analyse the population growth and redistribution in Canada over the period 1931-1961 in terms of the two components—natural increase and net migration on the basis of the data in

INTERNAL MIGRATION IN CANADA

**Table 4.4 – Amounts and Rates of Natural Increase, Net Migration and Total Population Increase, by Province, 1931- 1941, 1941- 1951 and 1951- 1961**

NOTE. – The natural increase given here and for the later intercensal periods is obtained by subtracting the estimated intercensal net migration from the corresponding total increase of population.

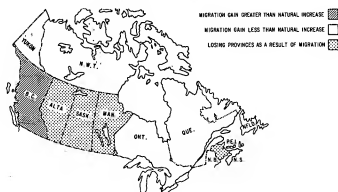
Province or territory	Number			Rate per 1,000 average population of the decade		
	Natural increase	Net migration	Total increase	Natural increase	Net migration	Total increase
1931- 1941						
Prince Edward Island ....	9,581	- 2,572	7,009	105	- 28	77
Nova Scotia .....	59,437	5,679	65,116	109	10	119
New Brunswick .....	57,128	- 7,946	49,182	132	- 18	114
Quebec .....	432,910	24,310	457,220	139	8	147
Ontario .....	259,098	96,874	355,972	72	27	99
Manitoba .....	67,408	- 37,803	29,605	94	- 53	41
Saskatchewan .....	114,754	- 140,547	- 25,793	126	- 155	- 28
Alberta .....	100,862	- 36,298	64,564	132	- 47	84
British Columbia .....	34,500	89,098	123,598	46	118	163
Yukon and Northwest Territories .....	1,892	1,504	3,396	124	99	223
<b>Canada .....</b>	<b>1,137,570</b>	<b>- 7,701</b>	<b>1,129,869</b>	<b>104</b>	<b>- 1</b>	<b>103</b>
1941- 1951						
Prince Edward Island ....	11,687	- 8,305	3,382	121	- 86	35
Nova Scotia .....	108,337	- 43,715	64,622	177	- 72	106
New Brunswick .....	89,390	- 31,094	58,296	184	- 64	119
Quebec .....	717,800	5,999	723,799	194	2	196
Ontario .....	489,228	320,659	809,887	117	76	193
Manitoba .....	87,782	- 40,985	46,797	116	- 54	62
Saskatchewan .....	92,329	- 156,593	- 64,264	107	- 181	- 74
Alberta .....	120,962	22,370	143,332	139	26	165
British Columbia .....	113,388	233,961	347,349	114	236	350
Yukon and Northwest Territories .....	4,430	3,728	8,158	211	177	388
<b>Canada .....</b>	<b>1,835,333</b>	<b>306,025</b>	<b>2,141,358</b>	<b>146</b>	<b>24</b>	<b>170</b>
1951- 1961						
Newfoundland .....	108,381	- 11,944	96,437	265	- 29	235
Prince Edward Island ....	15,971	- 9,771	6,200	157	- 96	61
Nova Scotia .....	126,091	- 31,668	94,423	183	- 46	137
New Brunswick .....	109,408	- 27,169	82,239	196	- 49	148
Quebec .....	1,035,192	168,338	1,203,530	222	36	258
Ontario .....	973,266	665,284	1,638,550	180	123	302
Manitoba .....	145,529	- 384	145,145	171	-	171
Saskatchewan .....	163,452	- 69,990	93,463	186	- 80	106
Alberta .....	268,172	124,271	392,443	236	109	345
British Columbia .....	240,535	223,337	463,872	172	160	332
Yukon and Northwest Territories .....	9,523	3,003	12,526	304	96	399
<b>Canada .....</b>	<b>3,195,520</b>	<b>1,033,298</b>	<b>4,228,818</b>	<b>198</b>	<b>64</b>	<b>262</b>

SOURCE: Derived from Tables A.1, 3.7, 3.12, and 4.1.

CHART 4.4

RELATIVE MAGNITUDE OF NATURAL INCREASE AND NET MIGRATION  
BY PROVINCES, 1931-1941 TO 1951-1961

1931-1941



1941-1951



1951-1961



Source: Table 4.4

Table 4.1, and the net intercensal migration estimates for all ages made in Chapter Three. The estimates of net intercensal migration of the Canadian-born and foreign-born populations, by sex, for 1931-1961 were added to obtain the total net migration. The present analysis, therefore, focuses on the combined effect of internal and international migration on population growth. The estimates of natural increase shown in Table 4.4 are derived by subtracting the intercensal net migration from the total intercensal increase of population. They do not, therefore, agree with estimates that would be obtained independently from vital statistics and no adjustment for this difference has been made. It is assumed that the implied patterns of redistribution due to natural increase as shown by the data used here will differ little from those implied by the official vital statistics for the total population.

Both natural increase and net migration have contributed to the observed intercensal population change in Canada and the provinces. Table 4.4 gives the amounts and rates of the components of intercensal growth for 1931-1961. The net migration figures for Canada in the table are the balance of provincial gains and losses due to migration, including migration of the foreign born. Because net internal migration is zero at the national level, the net migration figures for Canada shown in Table 4.4 represent the intercensal net external or international migration. These data show that between 1931 and 1961 the decennial gains due to international migration followed an irregular pattern of change. The net international migration for the period 1931-1941 was a net loss of 7,000, followed by net gains in the subsequent periods. The net immigration in Canada reached a peak of over one million in 1951-1961. Natural increase was always much higher than net international migration in all the intercensal periods after 1931 and it was thus the dominant factor of population growth. In fact, in 1931-1941, when there was a net loss due to migration, natural increase was the sole source of population growth. It may be noted, however, that if the indirect effects of migration on the natural increase are also taken into account, the contribution of internal migration to the population growth will be more than that observed here.<sup>3</sup> Because the death rate in Canada is low and follows a fairly steady downward trend during the whole period (George and Zayachkowski, 1968), the observed variations in natural increase must be attributed mainly to the changes in birth rates.

There are substantial differences among the provinces in level and direction of natural increase and net migration (Table 4.4). These differences had been responsible for the differences in the growth rates of the provinces and the changes in the distribution of national population observed earlier. The amounts of natural increase are associated with the size of population in a province, i.e., the larger the population size, the higher the amounts of natural increase. Therefore, natural increase rates are more

relevant for studying the differences in growth rates among provinces than are amounts of natural increase. In the case of net migration, both amounts and rates of migration are relevant because, compared with natural increase, amounts of migration are less dependent on population size.

As already stated, it is evident from Table 4.4 that, in all the provinces, natural increase has been the dominant factor of population growth. None of the provinces lost population as a result of natural increase during 1931-1961.<sup>4</sup> Also, except in British Columbia for 1931-1941 and 1941-1951, net migration gain did not exceed natural increase in any of the intercensal periods. The relative magnitude of natural increase and net migration by provinces is shown in Chart 4.4. In terms of rates, natural increase rates exceeded net migration rates in all the provinces except British Columbia. The different pattern for British Columbia may be attributed more to lower natural increase as a result of lower birth rates there than to higher migration rates. The average birth rates for Canada (excluding the Yukon and Northwest Territories) in 1931-1941 and 1941-1951 were 21.1 and 25.6, respectively, and the corresponding rates for British Columbia were 14.8 and 21.9.

Is the above relationship of natural increase and net migration to population growth valid for differences in rates of growth as well? This may be examined fairly easily by the method of rank correlation. The application of this method to the decade growth rates vis-à-vis natural increase and net migration rates yielded the following coefficients of rank correlation for each pair of variables.

	<u>1931-1941</u>	<u>1941-1951</u>	<u>1951-1961</u>
Growth with natural increase.....	+0.03	+0.48	+0.51
Growth with net migration .....	+0.89	+0.92	+0.90

As expected, the association is much higher between rates of population growth and rates of net migration than between rates of population growth and rates of natural increase. This indicates that although natural increase was the dominant factor of population growth in Canada, the interprovincial differences in population growth for the intercensal periods 1931-1961 were mostly due to migration.

**4.4.1 REDISTRIBUTION THROUGH NATURAL INCREASE AND NET MIGRATION** - The magnitude of net population redistribution or displacement in Canada as a result of population growth is presented in Table 4.3. From the estimates of natural increase and net migration for each province it is possible to estimate the amounts of redistribution attributable to each of these factors. A comparison of estimates of redistribution due to the two components, and the resultant estimates of net redistribution from them,

will indicate the relative importance of natural increase and net migration and the interaction effect of the two on the over-all population redistribution.

The method adopted to measure separately the redistribution as a result of natural increase and that caused by net migration was the one used by Eldridge and Thomas in their study (1954, pp. 55 and 56). The estimates of redistribution due to natural increase were obtained by summing the positive (or negative) differences in each province between the estimated (or 'observed') natural increase for a given intercensal period and the 'expected' natural increase for the same period. The expected values were obtained by distributing the corresponding natural increase for Canada among the provinces in accordance with their population size at the beginning of the intercensal period. A similar method was used to estimate redistribution due to net migration. The expected values of net migration were calculated for each province by distributing the net migration for Canada in accordance with the population size of each province at the beginning of the intercensal period. Thus, the redistribution due to migration is the sum of excesses of provincial gains through migration over and above the amounts of gain or loss that these provinces would have had if they had experienced the same rate of net gain or loss as Canada as a whole.

A measure of total or 'net' redistribution, i.e., the combined effect of both natural increase and net migration, was also estimated by first computing the balance of the two redistributions (by adding the two redistributions) for each province and then summing the absolute differences. These estimates are almost the same as the estimates in Table 4.3 obtained by applying the "index of redistribution" to the total population at the end of the decade. The estimates obtained here do not measure actual or 'physical' movements of population; they are only excesses of observed changes over expected changes (for elaboration of this point, see Eldridge and Thomas, 1964, p. 56). The reliability of these measures depends on the accuracy of the enumerated population, estimates of net migration and natural increase and the estimation of the expected population. Table 4.5 gives the amounts of interprovincial redistribution resulting from natural increase, net migration, and the net effect of the redistribution from these sources for Canada and the provinces, 1931-1961.

The results show that migration has been the dominant factor in redistributing the population of Canada. The ratios of redistribution through migration to redistribution through natural increase for Canada were 1.3 in 1931-1941, 2.0 in 1941-1951 and 2.7 in 1951-1961.

**Table 4.5 – Interprovincial Redistribution of Population Due to Net Migration and Natural Increase,  
1931- 1941, 1941- 1951 and 1951- 1961**

Province or territory	1931 - 1941			1941 - 1951			1951 - 1961		
	Due to migration	Due to natural increase	Net redistribution	Due to migration	Due to natural increase	Net redistribution	Due to migration	Due to natural increase	Net redistribution
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland .....	...	...	...	...	...	...	- 38,603	25,937	- 12,666
Prince Edward Island ....	- 2,507	- 88	- 2,595	- 10,845	- 3,546	- 14,391	- 17,004	- 6,398	- 23,402
Nova Scotia .....	6,059	3,240	9,299	- 59,077	16,203	- 42,874	- 79,096	- 20,583	- 99,679
New Brunswick .....	- 7,643	12,422	4,779	- 43,274	16,344	- 26,930	- 65,194	- 8,187	- 73,381
Quebec .....	26,444	117,689	144,133	- 82,595	186,471	103,876	- 130,802	110,089	- 20,713
Ontario .....	99,421	- 117,096	- 17,675	219,945	- 114,781	105,164	326,258	- 75,185	251,073
Manitoba .....	- 37,283	- 9,378	- 46,661	- 60,387	- 28,578	- 88,965	- 57,629	- 31,503	- 89,132
Saskatchewan .....	- 139,863	13,738	- 126,125	- 180,432	- 50,643	- 231,075	- 131,377	- 26,362	- 157,739
Alberta .....	- 35,755	20,663	- 15,092	1,193	- 6,043	- 4,850	54,937	53,753	108,690
British Columbia .....	89,613	- 41,603	48,010	212,203	- 17,104	195,099	137,367	- 25,332	112,035
Yukon and Northwest Territories .....	1,514	413	1,927	3,269	1,677	4,946	1,143	3,771	4,914
 Canada .....	 223,051	 168,165	 208,148	 436,610	 220,695	 409,085	 519,705	 193,550	 476,712
 Rate per 1,000 average population of the decade...	 20	 15	 19	 34	 17	 32	 32	 12	 30

SOURCE: Derived from Table 4.4 as explained in the text.

## INTERNAL MIGRATION IN CANADA

The rates of redistribution per 1,000 average population during the decades for Canada show fairly close correspondence between the rates of net redistribution and redistribution due to net migration (Table 4.5). The fall in the index of redistribution (Table 4.3) and the rate of net redistribution in 1951-1961 is accounted for by natural increase having retarded the redistribution effects of interprovincial migration. The drop in the amount and rate of redistribution due to natural increase in 1951-1961 may be attributed to the steady fall of birth rates since 1957 (*Vital Statistics, 1965*, Table B1).

Some cancellation of redistribution is possible due to the offsetting effects of natural increase and net migration. Such cancellation occurs, for example, when a province has an inward redistribution due to natural increase and an outward redistribution due to migration, or vice versa. The sums of the redistribution due to migration and natural increase represent the total redistribution resulting when these two are taken separately. The excess of these sums over net redistribution (Table 4.5) gives the amount of redistribution cancelled by the offsetting effects of net migration and natural increase. The sums of the total redistribution and the differences between total and net redistribution for Canada, 1931-1941 to 1951-1961 are:

<u>Period</u>	<u>Total redistribution</u>	<u>Excess of total over net redistribution</u>	<u>Excess over total redistribution</u>
	<u>No.</u>	<u>No.</u>	<u>p.c.</u>
1931-1941.....	391,216	183,068	46.8
1941-1951.....	657,305	248,220	37.8
1951-1961.....	<u>713,255</u>	<u>236,543</u>	<u>33.2</u>

These data show that the offsetting effect of natural increase and net migration cancelled about 33 to 47 per cent of the total redistribution in Canada during 1931-1961.

In all three decades under study (Table 4.5), only British Columbia among the provinces, and the Yukon and Northwest Territories gained on total or net redistribution, and only British Columbia gained through migration. Prince Edward Island, Manitoba and Saskatchewan had losses on total redistribution in all the three decades and migration was the major factor of the outward shift in redistribution. Much of the cancellation effects of the two components of redistribution observed earlier occurred in Ontario, Quebec and British Columbia. Only Quebec and the Yukon and Northwest Territories had a consistent gain as a result of redistribution due to natural increase in all the decades.

In 1931-1941 Nova Scotia, New Brunswick, Quebec, British Columbia and the Yukon and Northwest Territories gained on net redistribution. Of these, only Nova Scotia and Quebec gained through both natural increase and migration; New Brunswick gained as a result of natural increase and the Yukon and Northwest Territories as a result of migration. In 1941-1951 Quebec, Ontario, British Columbia and the Yukon and Northwest Territories gained on net redistribution. Of these, Quebec's gain was a result of natural increase and that of the Yukon and Northwest Territories was a result of both factors; British Columbia and Ontario gained as a result of migration alone. In 1951-1961 only Ontario, Alberta, British Columbia and the Yukon and Northwest Territories had net redistribution gains. Of these, Ontario and British Columbia gained only through migration; Alberta and the Yukon and Northwest Territories gained as a result of both natural increase and migration.

**4.4.2 REDISTRIBUTION THROUGH MIGRATION OF CANADIAN BORN AND FOREIGN BORN** - The foregoing discussion of redistribution through migration has shown only the combined effect of Canadian-born and foreign-born population on interprovincial redistribution; in this section the two components of migration are considered separately. Although neither the intercensal migration estimates of Canadian born nor of those of the foreign born used here are purely internal migration, the former is mainly internal and the latter is a mixture of internal and external migration (for details of the distinction, see Chapter Five).

The measure of redistribution or displacement resulting from the two types of migration was obtained by the method described in Section 4.4.1 for natural increase and total net migration. In this method the net balances of migration for Canada of the Canadian born and foreign born (i.e., the net balances of provincial gains and losses for Canada as a whole) were separately prorated among the provinces in accordance with the distribution of the total population (Canadian born plus foreign born at the beginning of the decade). The positive differences between these 'expected' net changes due to the migration of foreign born and Canadian born and the corresponding estimated or 'observed' provincial net migration were accumulated to obtain the total amounts of redistribution through migration of Canadian born and foreign born. The results are presented in Table 4.6.

The estimates show that in 1931-1941 and 1941-1951 migration among Canadian born, which is mainly internal, was a more important factor than migration among the foreign born in population redistribution. The difference in the amounts of redistribution between the two types of migration was highest in 1931-1941 when there was a substantial reduction of immigration. During 1951-1961, because of the heavy immigration after World War II, migration of the foreign born became the predominant factor in changing the provincial distribution of population.

**Table 4.6 – Amounts and Rates of Interprovincial Redistribution of Population Due to Net Migration Among the Canadian-born and Foreign-born Populations, 1931-1941, 1941-1951 and 1951-1961**

Province or territory	1931-1941		1941-1951		1951-1961	
	Canadian born	Foreign born	Canadian born	Foreign born	Canadian born	Foreign born
	No.	No.	No.	No.	No.	No.
Nfld. ....	...	...	...	...	- 11,845	- 26,758
P.E.I. ....	- 2,689	183	- 8,019	- 2,827	- 9,642	- 7,362
N.S. ....	1,175	4,884	- 33,407	- 25,670	- 36,108	- 42,988
N.B. ....	- 7,366	- 277	- 29,940	- 13,334	- 29,070	- 36,124
Que. ....	22,160	4,284	- 9,617	- 72,978	7,255	- 138,057
Ont. ....	71,236	28,184	111,321	108,625	72,469	253,791
Man. ....	- 25,529	- 11,754	- 47,859	- 12,527	- 31,617	- 26,012
Sask. ....	- 97,339	- 42,524	- 132,047	- 48,386	- 76,569	- 54,808
Alta. ....	- 21,848	- 13,907	1,877	- 684	38,978	15,958
B.C. ....	59,242	30,371	144,658	67,545	75,302	62,064
Y.T. and N.W.T.	958	556	3,033	236	847	296
<b>Canada .....</b>	<b>154,771</b>	<b>68,462</b>	<b>260,889</b>	<b>176,406</b>	<b>194,851</b>	<b>332,109</b>
<b>Rates per 1,000 average total population of the decade</b>						
Nfld. ....	...	...	...	...	- 29	- 66
P.E.I. ....	- 30	2	- 85	- 30	- 98	- 75
N.S. ....	2	10	- 58	- 45	- 55	- 65
N.B. ....	- 18	- 1	- 64	- 29	- 54	- 68
Que. ....	8	2	- 3	- 21	2	- 32
Ont. ....	25	10	33	32	17	59
Man. ....	- 51	- 24	- 84	- 22	- 47	- 38
Sask. ....	- 155	- 68	- 201	- 74	- 107	- 77
Alta. ....	- 45	- 29	3	- 1	45	18
B.C. ....	133	68	216	101	74	61
Y.T. and N.W.T.	72	42	163	13	31	11
<b>Canada .....</b>	<b>18</b>	<b>8</b>	<b>25</b>	<b>17</b>	<b>14</b>	<b>24</b>

SOURCE: Derived from Tables A.1, 3.7 and 3.12 as explained in Section 4.4.2.

## COMPONENTS OF POPULATION GROWTH AND REDISTRIBUTION

It appears from the data that the provinces which experienced gains or losses as a result of migration were, by and large, the same for both Canadian born and foreign born. This can be verified by examining the extent of cancellation of redistribution due to one type of migration by compensatory redistribution due to the other type of migration. Such cancellation effect was measured by summing the amounts of redistribution from the two types of migration for each intercensal period (Table 4.6) and comparing the sums with the net redistribution due to total net migration (Table 4.5). The cancellation was found to be very much less than that between migration and natural increase, amounting to only 170 in 1931-1941, 605 in 1941-1951 and 7,200 in 1951-1961. The percentage ratios of these numbers to the total redistribution of Canadian born plus foreign born were 0.1 in 1931-1941 and 1941-1951 and 1.4 in 1951-1961.

Examination of redistribution shows that only Ontario and British Columbia among the provinces and the Yukon and Northwest Territories gained due to both types of migration in all the intercensal periods. Ontario and British Columbia had the major share of the total distribution gain in all three decades; on average, the two provinces together had about 86 per cent of the total redistribution due to the migration of Canadian born, and 93 per cent of the total redistribution due to the migration of foreign born during 1931-1961.

In 1931-1941, Nova Scotia and Quebec gained from redistribution resulting from both types of migration. In 1941-1951, Alberta gained from the redistribution due to Canadian-born migration. In 1951-1961, Quebec gained from redistribution due to Canadian-born migration and Alberta gained due to foreign-born migration.

The rates of redistribution per 1,000 average total population of the decade (Canadian born plus foreign born) give the relative measures of redistribution among each province over time through each type of migration (Table 4.6). Because the denominators used in the calculation of rates for Canadian born and foreign born are the same, the rates show similar trends in redistribution for Canada as are shown by the amounts due to both types of migration. The trend shows a pattern of alternate rise and fall for the Canadian born, and a steady rise for the foreign born in the three intercensal periods; in 1951-1961 only, the foreign born had higher amounts and rates of redistribution. The level of redistribution in the provinces shows slightly different patterns. In 1931-1941, Ontario had the highest amount of redistribution gain due to the migration of Canadian born but British Columbia and the Yukon and Northwest Territories had higher rates than Ontario; in other decades British Columbia had the highest amounts and rates due to migration of Canadian born. In the case of redistribution due to foreign-born migration, British Columbia and Ontario had the highest amounts and rates

in 1931-1941 and 1951-1961, respectively, but in 1941-1951 Ontario had the highest amount and British Columbia had the highest rate. For the other gaining provinces, the pattern shown by the amounts and rates for foreign born were, by and large, similar and the amounts and rates for the Canadian born showed marked variations.

**4.4.3 REDISTRIBUTION THROUGH INTERNAL MIGRATION IN 1956-1961** – The migration data of the 1961 Census make it possible to study interprovincial redistribution of population, aged five years and over, solely due to internal migration of the Canadian born and foreign born. The measure of redistribution or displacement resulting from the two groups was derived by summing the net gains or losses of migration by provinces in 1956-1961. Both sums will be equal and both are measures of the interprovincial shifts of population resulting from internal migration.

The estimates of net internal migration for 1956-1961 given in Table 5.10 show that the amounts of redistribution were 63,900 for Canadian born and 11,900 for foreign born, thus indicating that migration among the Canadian born was the major component of redistribution due to total net internal migration in that period; of the total redistribution in 1956-1961 (Canadian-born plus foreign-born redistribution) 84.3 per cent was due to the migration of Canadian born. However, the rates of redistribution, which showed the impact of redistribution upon the population by the two groups, showed only small differences between the two. The rates of redistribution due to internal migration in 1956-1961 per 1,000 population aged five and over, of the Canadian born and foreign born in 1961 were, respectively, 4.9 and 4.2.

## 4.5 SUMMARY

Canada is an immigrant country and its population has grown at a very uneven pace over the past hundred years. The rapid population growth occurred since 1901 with the highest intercensal growth rate in 1901-1911. The variations of provincial rates of growth were much greater in the earlier decades of the present century than the later ones. The convergence of provincial rates in the later decades were largely brought about by the slower growth in the initially most rapidly increasing western provinces, which were in the phase of early settlement before 1911 when their populations were small. The falling trend in the growth rates of the western provinces in the later decades was reversed in 1951-1961.

The distribution of population by provinces shows that Ontario and Quebec have the major share of the total population of Canada. During the present century there has been a westward shift of the population, particularly to British Columbia and Alberta. The Maritime Provinces experienced a steady decline in their share of the total population. The index of population concentration is high in Canada. The phenomenal growth of population

in the western provinces in the early decades of the present century caused a reduction in the concentration between 1901 and 1921 but since then it has increased steadily.

The rate of decade interprovincial net redistribution of population shows that, although there was no consistent trend, an over-all downward trend was indicated. The close similarity in the pattern of intercensal rate of change of population and the redistribution index indicates a rather close relation between national growth and internal redistribution of population. The redistribution index shows that, by and large, the same provinces gained or lost population in Canada as a result of population redistribution during 1931-1961. Only the four western provinces gained from the net redistribution of population during 1901-1931 but in the subsequent decades gains were evident in Ontario, Quebec, Alberta, British Columbia, the Yukon and Northwest Territories and Newfoundland.

Although both natural increase and net migration contributed to the intercensal population change in Canada and the provinces, natural increase was the dominant factor of growth. However, the interprovincial differences in the population growth for the intercensal periods were mostly a result of the differentials in the level and direction of migration. Also, migration was the dominant factor in redistributing the population of Canada. The offsetting effects of migration and natural increase (i.e., the effect of opposite direction of migration and natural increase) cancelled about 33 to 47 per cent of the total redistribution in Canada during 1931-1961.

In 1931-1941 and 1941-1951 migration among Canadian born, which is mainly internal, was a more important factor in population redistribution than migration among foreign born. Further, the provinces that experienced gains or losses as a result of migration of Canadian born and foreign born were, by and large, the same. However, according to the migration data for 1956-1961, which excluded external migration, about 84 per cent of the total redistribution during this period was due to the migration of Canadian born.

#### FOOTNOTES TO CHAPTER FOUR

<sup>1</sup> In order to calculate the amount of gross redistribution, it is necessary to take into account the separate effect of in- and out-movement of population on population redistribution. In the present calculation, for example, a heavy shift of population into a province countered by an equally heavy outward shift would have no effect upon the amount of net redistribution.

<sup>2</sup> These findings are contrary to the United States experience where somewhat less than a fifth of the redistribution that took place within decades was cancelled by contrary developments from decade to decade (Eldridge and Thomas, 1964, p. 30).

<sup>3</sup> No estimate of the indirect effects of migration on natural increase has been made in this study.

<sup>4</sup> These findings corroborate the results of the study by Anderson (1966, Table 15). It may be noted that Anderson's estimates are for calendar-year intercensal intervals and not for intercensal estimates, unlike those in the present study.



## ***Chapter Five***

# **LEVELS AND TRENDS IN MIGRATION: CANADIAN BORN AND FOREIGN BORN**

This chapter presents a historical analysis of the levels and trends of interprovincial migration and their net effect from 1901 to 1961. For the period before 1931, the discussion is brief, and the main data used are the life-time migration estimates derived from the tabulations of population by province of birth and province of residence in each census. For the more detailed discussion covering the period 1931-1961, the data used are the intercensal migration estimates made in Chapter Three for the Canadian-born and foreign-born populations, and the migration estimates of the 1961 Census. The migration estimates for the foreign born include migrants from abroad for the intercensal periods, but the estimates for 1956-1961 refer only to those who came earlier and who moved within the country between those years.

The migration estimates for the Canadian born and the foreign born are treated separately to show the extent and pattern of the two categories of movement. The estimates of intercensal net migration for the Canadian born are mostly internal migration but the estimates for the foreign born refer to a mixture of internal and international migration, because external migration among the Canadian born has not been disaggregated at the provincial level. The migration balance at the national level, which is not zero in the present case, refers to the net migration between Canada and other countries among the Canadian born. The predominant external movement of the Canadian-born population is between the United States and Canada. As regards the intercensal estimates for foreign born, they reflect the combined effect of immigration, emigration, and the interprovincial movement among those who lived in Canada before each respective intercensal period. The algebraic sum of net gains and losses due to the migration of the foreign born at the national level gives the net international migration.

## 5.1 GROSS INTERNAL AND EXTERNAL MIGRATION IN CANADA AND THE PROVINCES, 1901- 1961

5.1.1 MIGRATION AMONG CANADIAN BORN – The total number of persons residing outside the province of their birth at the Canadian censuses measures the extent of the interprovincial mobility of the population, giving a historical perspective of migration in Canada. The number and proportion of such surviving interprovincial migrants at each census date from 1901 to 1961 are given in Table 5.1, along with the comparable proportions for the United States according to the United States censuses for 1900 to 1960. Both Canadian and United States data do not include migrants who had returned to the province or state of their birth, and thus contain only minimal counts of the survivors of life-time interprovincial or interstate migrants.

**Table 5.1 – Number and Percentage of Persons Residing Outside Their Province of Birth in Canada, 1901- 1961, with Corresponding Percentages for the United States, 1900- 1960**

NOTE. — Numbers of persons "not stated" in their province or state of birth are prorated.

Year	Persons residing outside their province of birth		Percentage for the United States <sup>a</sup>
	Number	Percentage of Canadian-born population	
1901 .....	302,142 <sup>b</sup>	6.5	20.6
1911 .....	561,516	10.0	21.6
1921 .....	704,157	10.3	22.2
1931 .....	791,394	9.8	23.4
1941 .....	918,660	9.7	22.5
1951 .....	1,412,496	11.8	25.5
1961 .....	1,892,052	12.3	29.1

<sup>a</sup> Percentage of persons residing outside their state of birth in the United States (according to the U.S. Censuses 1900- 1960) to the corresponding total United States born population.

<sup>b</sup> "Not stated" categories for the Yukon and Northwest Territories were not distributed. See headnote to Table 5.2.

SOURCES: For Canada — 1931 Census, Vol. I, Table 75; 1941 Census, Vol. III, Table 19; 1951 Census, Vol. X, Table 20; 1961 Census, Vol. I, Part II, Table 49. For United States — 1900- 1951, Shryock, 1964, p. 74; U.S. Census of Population 1960, *United States Summary, General Social and Economic Characteristics PC (1)*, Table 109.

The data in Table 5.1 show that interprovincial migration in Canada is much lower than interstate migration in the United States; the proportion of interprovincial migration was 12 per cent in Canada in 1961 and the interstate migration in the United States was 29 per cent in 1960. This

does not actually mean that Americans are two and a half times more mobile than Canadians. A good portion of the observed difference is simply an artifact of statistics. Because of the large size of the Canadian provinces, many movements that would be classified as interstate migrations in the United States would be intraprovincial migrations in Canada. However, the over-all trend in the proportion of interprovincial migration in Canada since 1901 is upward (from 6.7 per cent in 1901 to 12.3 per cent in 1961) which indicates that Canadians, in general, tend to be more mobile today than before. The dips in 1931 and 1941 suggest that the economic depression of the 1930s tended to inhibit interprovincial migration rather than to "push" people from areas of lower economic opportunities to those of higher opportunities. This may not apply in the case of short-distance migration like rural-urban migration, which is predominantly intraprovincial.

For the individual provinces, the life-time gross interprovincial migration for Canada in Table 5.1 represents two counter movements—in-migration and out-migration. Thus, for the country as a whole, gross interprovincial migration is either the sum of in-migrants or the sum of out-migrants, but, for individual provinces, it is the sum of in-migrants and out-migrants.<sup>1</sup> The difference between in-migrants and out-migrants gives the life-time net migration (Chapter Three, Section 3.1.1). Tables 5.2 and 5.3 give the relevant historical data for the analysis of the levels, trends and variations in the life-time interprovincial migration.

The data show that for some provinces the share of in-migration has declined substantially, accompanied by a corresponding increase in their share of out-migration during the 60-year period. The most spectacular changes occurred in the Prairie Provinces, Quebec, Ontario and British Columbia. The heavy westward movement at the beginning of the century, the subsequent decline of this movement in Manitoba and Saskatchewan, and the upward trend in migration to British Columbia and Alberta must have been responsible for such phenomenal changes in the levels of in- and out-migration. The following data taken from Table 5.2 for 1901 and 1961 demonstrate this fact clearly.

Province	1901		1961	
	In-migrants	Out-migrants	In-migrants	Out-migrants
	p.c.	p.c.	p.c.	p.c.
Manitoba .....	26.0	3.6	6.3	13.0
Saskatchewan ....	7.9	1.9	5.9	19.3
Alberta .....	5.8	4.0	13.5	9.4
Quebec .....	8.1	28.5	11.8	14.2
Ontario .....	23.7	46.6	30.5	19.2
British Columbia ..	12.8	0.4	23.5	4.4

Table 5.2 – Percentage Distribution of the Interprovincial In-migrants and Out-migrants of the Canadian Born by Province, 1901-1961

Province or territory	1901		1911		1921		1931		1941		1951		1961	
	In-migrants	Out-migrants	In-migrants	Out-migrants	In-migrants	Out-migrants	In-migrants	Out-migrants	In-migrants	Out-migrants	In-migrants	Out-migrants	In-migrants	Out-migrants
Nfld. ....	...	...	...	...	...	...	...	...	...	...	0.3	3.1	0.5	2.9
P.E.I. ....	0.8	3.0	0.3	2.6	0.3	2.5	0.3	2.2	0.3	2.0	0.4	1.9	0.4	1.9
N.S. ....	3.7	6.3	2.2	6.0	2.3	6.3	2.0	6.7	2.6	6.1	3.7	7.0	3.9	8.2
N.B. ....	4.2	5.5	2.5	4.9	3.0	4.9	3.0	5.5	2.8	5.6	2.6	6.4	3.0	7.2
Que. ....	8.3	29.1	5.7	21.4	7.3	21.6	10.2	19.8	12.0	17.3	11.4	15.2	11.8	14.2
Ont. ....	24.6	47.6	14.9	54.8	16.6	47.9	18.8	40.1	23.8	31.5	29.0	21.8	30.5	19.2
Man. ....	26.9	3.7	16.8	7.1	13.7	8.7	11.3	11.4	9.6	13.3	6.9	13.4	6.3	13.0
Sask. ....	8.2 <sup>a</sup>	1.4 <sup>a</sup>	26.2	1.2	24.2	4.0	20.3	7.6	13.6	14.8	7.6	19.0	5.9	19.3
Alta. ....	6.1 <sup>a</sup>	2.6 <sup>a</sup>	15.7	0.9	17.1	2.5	15.9	4.7	13.4	7.1	12.1	8.6	13.5	9.4
B.C. ....	13.2	0.4	15.1	0.6	15.2	1.5	17.9	1.9	21.5	2.2	25.4	3.4	23.5	4.4
Y.T. and N.W.T. ....	4.0 <sup>b</sup>	0.4 <sup>b</sup>	0.6	0.5	0.3	0.1	0.3	0.1	0.4	0.1	0.6	0.2	0.7	0.3
Canada ....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>a</sup> Data for Saskatchewan and Alberta were not available separately for 1901; separate distributions were estimated on the basis of the distributions of in-born population enumerated in the two provinces in 1906.

<sup>b</sup> In 1901 the number of "not stated" categories for the Yukon and Northwest Territories was 10,001; because of its abnormally large size, this number was not distributed on a prorata basis.

SOURCES: 1931 Census, Vol. I, Table 75; 1941 Census, Vol. III, Table 19; 1951 Census, Vol. X, Table 20; 1961 Census, Vol. I, Part II, Table 49; 1906 Census of Manitoba, Saskatchewan and Alberta, p. 86.

Table 5.3 - Life-time Interprovincial Net Migration, by Province, 1901 - 1961

Province or territory	1901	1911	1921	1931	1941	1951	1961
	No.	No.	No.	No.	No.	No.	No.
Newfoundland .....	...	...	...	...	...	- 40,036	- 46,007
Prince Edward Island .....	- 6,668	- 12,912	- 15,735	- 14,621	- 15,840	- 21,452	- 28,486
Nova Scotia .....	- 7,876	- 21,646	- 27,919	- 36,646	- 31,721	- 46,246	- 81,009
New Brunswick .....	- 3,991	- 12,971	- 13,851	- 19,768	- 26,547	- 54,162	- 80,413
Quebec .....	- 62,509	- 88,307	- 100,643	- 75,995	- 48,139	- 54,729	- 45,262
Ontario .....	- 69,899	- 224,208	- 220,729	- 169,132	- 70,321	102,503	215,776
Manitoba .....	69,935	54,361	35,233	- 962	- 34,463	- 91,400	- 126,681
Saskatchewan .....	20,398	140,414	142,357	100,272	- 10,993	- 161,505	- 254,963
Alberta.....	10,642	83,477	103,071	88,686	58,136	49,891	77,770
British Columbia .....	38,818	81,162	96,516	126,778	177,478	311,362	362,354
Yukon and Northwest Territories	11,150	630	1,700	1,388	2,410	5,774	6,921
Sum of net gain or loss .....	150,943	360,044	378,877	317,124	238,024	469,530	662,821
Index of interprovincial migration <sup>a</sup> ..... p.c.	3.2	6.4	5.5	3.9	2.5	3.9	4.3

<sup>a</sup> See text for explanation.

SOURCE: Same as Table 5.2. See footnotes to Table 5.2.

Change in the levels and patterns of in-migration and out-migration had its effect on the extent and direction of net migration. This can be seen from the figures of life-time net migration (birth residence index) for the provinces (Table 5.3). Some provinces that were gaining through migration in the early years of this century were losing in the later years, and vice versa.

The sums of net in-migration or out-migration for the provinces and the index of gross interprovincial migration for each year give rough estimates of the extent of gross interprovincial migration. The index is obtained by dividing the migration sum for each year by the total Canadian-born population for the corresponding year. The indexes show that the level of migration was highest in 1911 and lowest in 1941, suggesting that interprovincial migration was probably highest during 1901-1911 and lowest during 1921-1931 and 1931-1941.

The high level of interprovincial migration during 1901-1911 was due to the heavy influx of migrants to the western part of Canada from other parts. Between 1901 and 1921 only the three Prairie Provinces, British Columbia, and the Yukon and Northwest Territories had gained through migration of the Canadian-born population. In 1931 Manitoba became a losing province and continued with accelerating net out-migration in the remainder of the period. Since 1931 Saskatchewan has been a consistently losing province. Alberta, British Columbia, and the Yukon and Northwest Territories had net in-migration during the entire 60-year period. The consistently losing provinces from 1901 to 1961 were the Atlantic Provinces and Quebec. Ontario, which was a losing province up to 1941, became a gaining province in 1951 and 1961, with the highest amount of net in-migration in 1961.

This discussion gives only a historical picture of life-time interprovincial migration of the Canadian born and does not indicate the trends and patterns of intercensal migration. Using the migration estimates derived in Chapter Three, the analysis of intercensal net migration for 1931-1961 is given in Section 5.3.

**5.1.2 MIGRATION OF FOREIGN BORN** - The substantial proportion of foreign-born population in Canada has affected the growth and redistribution of the total population; the 699,500 foreign-born persons in Canada in 1901 increased to 2,844,263 in 1961. The provincial distribution of the number and percentage of foreign born to the total population counted in the various censuses of Canada give a rough historical perspective of the levels of foreign-born migration in the provinces.

## GROSS INTERNAL AND EXTERNAL MIGRATION

Table 5.4 – Foreign-born Population by Province of Residence, 1901-1961

Province or territory	1901	1911	1921	1931	1941	1951	1961
Numbers							
Nfld. ....	...	...	...	...	...	3,829	6,269
P.E.I. ....	4,253	2,574	2,365	2,787	2,439	2,571	2,992
N.S. ....	24,402	36,275	43,505	41,797	40,741	28,680	34,168
N.B. ....	17,942	18,313	21,458	24,401	20,592	19,875	23,283
Que. ....	88,708	147,070	188,410	252,150	223,943	228,923	388,449
Ont. ....	324,160	507,846	641,683	804,285	733,282	849,965	1,353,157
Man. ....	74,352	190,840	222,372	236,589	193,586	168,354	169,998
Sask. ....	36,195	243,681	299,677	318,545	238,903	175,829	149,389
Alta. ....	31,240	212,426	273,364	305,738	258,387	240,016	288,749
B.C. ....	79,045	223,158	260,536	319,529	304,729	339,197	423,132
Y.T. and N.W.T.	19,203	4,778	1,919	1,704	2,245	2,672	4,677
Canada ....	699,500	1,586,961	1,955,289	2,307,525	2,018,847	2,059,911	2,844,263
Percentages							
Nfld. ....	...	...	...	...	...	0.2	0.2
P.E.I. ....	0.6	0.1	0.1	0.1	0.1	0.1	0.1
N.S. ....	3.5	2.3	2.2	1.9	2.0	1.4	1.2
N.B. ....	2.6	1.2	1.1	1.1	1.0	1.0	0.8
Que. ....	12.7	9.3	9.6	10.9	11.1	11.1	13.7
Ont. ....	46.3	32.0	32.9	34.9	36.4	41.3	47.6
Man. ....	10.6	12.0	11.4	10.2	9.6	8.2	6.0
Sask. ....	5.2	15.3	15.3	13.8	11.8	8.5	5.2
Alta. ....	4.5	13.4	14.0	13.2	12.8	11.6	10.1
B.C. ....	11.3	14.1	13.3	13.8	15.1	16.5	14.9
Y.T. and N.W.T.	2.7	0.3	0.1	0.1	0.1	0.1	0.2
Canada ....	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: Computed by subtracting the Canadian-born population by province of residence from the total population enumerated. For the data, see sources for Table 5.2.

These figures are affected by three factors—immigration, emigration, and deaths among immigrants. The rate of increase of foreign-born population was highest during the period 1901-1910 (385 per cent) reflecting the immigration of 1,644,147 persons during the calendar years 1901-1910 compared with the 339,000 arrivals during the preceding decade. The number of immigrant arrivals in each decade and the decade distribution of the total number for 1901-1960 are given in Table 5.5.

These figures indicate that the variations in the numbers and rates of foreign born were mainly caused by the variations in the amount of immigration and, to a lesser extent, by emigration and deaths among the foreign born over time. The relevant data to measure the extent of their effects are

not readily available. The difference between the total immigration of 6.8 million and the number of foreign born of 2.8 million at the time of the 1961 Census may be taken as the total number of those who died, returned to their home lands, or moved elsewhere.<sup>2</sup>

**Table 5.5 – Immigrant Arrivals and their Percentage Distribution in each Decade, 1901 - 1960**

Period	Number	Percentage of 1901 - 1960 total
1901 - 1910 .....	1,644,147	24.2
1911 - 1920 .....	1,712,254	25.1
1921 - 1930 .....	1,230,202	18.1
1931 - 1940 .....	158,562	2.3
1941 - 1950 .....	491,321	7.2
1951 - 1960 .....	1,574,841	23.1
<b>1901 - 1960 .....</b>	<b>6,811,327</b>	<b>100.0</b>

SOURCES: For 1901 - 1930, DBS, *Canada Year Book*, 1939, p. 156; for 1931 - 1960, DBS, *Canada Year Book*, 1966, p. 224.

The distribution of the foreign born by province of residence (Table 5.4) shows that Ontario always had the highest proportionate numbers of the foreign-born population (nearly 50 per cent in 1961). Quebec had the second relative highest number in 1901, but dropped to sixth position in 1911 and 1921 mainly because of increases in the shares of the Prairie Provinces and British Columbia. There was only a slight change in the proportion of foreign born in British Columbia between 1901 and 1961; in 1961 it had the second highest proportion among the provinces. Ontario, British Columbia and Quebec together contained 76 per cent and the three Prairie Provinces 21 per cent of the total foreign born in 1961. The discussion of the decade interprovincial migration among the foreign born is carried out later for 1931 - 1961, using the intercensal estimates of migration.

## 5.2 THE EFFICIENCY OF INTERNAL MIGRATION

Net migration gains or losses are only a fraction of the total migration flows for a particular area. In order to measure the "efficiency" of gross migration on the redistribution of the population in an area, a ratio or index was calculated.

Shryock (1959, p. 685) defines "efficiency" of internal migration for an area as the ratio of net migration to the sum of the in- and out-migrations,

i.e., gross migration or population turnover (Thomas, 1941, pp. 288-298).<sup>3</sup> Thus, migration efficiency ( $M_e$ ) was calculated using the formula:

$$M_e = \frac{I - O}{I + O} \cdot 100$$

where  $I$  and  $O$  stand for in-migrants and out-migrants, respectively. "The higher the efficiency ratios for a set of areas the fewer the number of moves that is required to affect a given amount of population redistribution among them" (Shryock, 1959, p. 685; Shryock, 1964, C. 9). Theoretically, the index of efficiency can vary from zero to 100. The efficiency ratios will be positive or negative depending on the direction of net migration for the area concerned.

**5.2.1 THE EFFICIENCY OF LIFE-TIME MIGRATION OF THE CANADIAN BORN, 1901-1961** – The province-of-birth and province-of-residence data in the censuses have been used for the analysis in this section. Because of the offsetting effects of in-migration and out-migration, efficiency can differ a great deal from one part of the country to another. For example, in 1961 Ontario and British Columbia had about 940,000 and 528,000 gross migrants, respectively, but the net in-migration was 216,000 for the former and 362,000 for the latter. Thus, in many cases net migration represents only a small portion of the total turnover.

**Table 5.6 – Efficiency of Interprovincial Net Migration for the Canadian Born, by Province, 1901-1961**

(100 times the ratio of net migration to turnover;  
sign indicates direction of net migration)

Province or territory	1901	1911	1921	1931	1941	1951	1961
Nfld. ....	...	...	...	...	...	- 82.97	- 70.16
P.E.I. ....	- 57.46	- 79.06	- 79.18	- 74.31	- 73.80	- 65.56	- 63.98
N.S. ....	- 25.99	- 47.08	- 45.87	- 53.22	- 39.65	- 30.47	- 35.34
N.B. ....	- 13.56	- 31.23	- 24.97	- 29.46	- 34.37	- 42.88	- 41.67
Que. ....	- 55.38	- 58.07	- 49.31	- 32.04	- 17.89	- 14.52	- 9.21
Ont. ....	- 32.07	- 57.24	- 48.62	- 36.28	- 13.85	27.20	22.97
Man. ....	75.88	40.49	22.39	- 0.53	- 16.40	- 31.96	- 34.77
Sask. ....	70.19	91.55	71.90	45.23	- 4.21	- 43.01	- 53.46
Alta. ....	40.34	89.43	74.66	54.53	30.84	17.08	17.98
B.C. ....	94.15	91.74	81.30	81.11	81.62	76.46	68.64
Y.T. and N.W.T.	83.97	10.70	54.11	49.93	54.50	53.89	36.44

SOURCE: Same as Table 5.2. See Section 5.2 for explanations.

According to the data on life-time interprovincial migration, British Columbia had the highest positive efficiency ratios, averaging about 82 per cent during 1901-1961 (Table 5.6). The next highest positive efficiency was shown by Saskatchewan for 1901-1921 but after 1931 the efficiency in that province declined steadily. On the whole, the Prairie Provinces had a fairly high efficiency until 1931. The Atlantic Provinces had the highest negative efficiency throughout the period. Despite the fact that the amount of in-migration was fairly heavy for Ontario, its efficiency was negative until 1941 but positive in 1951 and 1961. It may be noted that migration was more unidirectional in British Columbia than in the other provinces. Thus, 69 to 93 per cent of the total interprovincial migrants to British Columbia constituted a gain to the province in its exchange of migrants with other provinces.

In order to compare the efficiency of interprovincial migration for the different years, a summary measure, i.e., efficiency index, was used. This was obtained by dividing the sum of interprovincial net in-migration by the total interprovincial migration (sum of interprovincial inward or outward migration for Canada) and multiplying the result by 100 (Shryock, 1964, p. 288).

Thus,

$$\text{Efficiency index} = \frac{\sum (\text{Net interprovincial in-migrants})}{\text{Total interprovincial migrants}} \cdot 100$$

The indexes for the census years 1901-1961 are: 1901, 49.5; 1911, 64.1; 1921, 53.8; 1931, 40.1; 1941, 25.9; 1951, 33.2; and 1961, 35.0.

These indexes show that the efficiency of interprovincial migration was highest in 1911 and lowest in 1941, which corresponds to the index of migration noted earlier (Table 5.3). The trend of the efficiency index was downward from 1911 to 1941, but turned upward in the subsequent period. The change occurred because some of the provinces of previously heavy in-migration lost substantial numbers of migrants to other provinces in the later years.

**5.2.2 THE EFFICIENCY OF MIGRATION OF THE CANADIAN BORN AND FOREIGN BORN, 1956-1961** - The 1961 migration data make it possible to examine "efficiency" for the Canadian-born and foreign-born populations, and for contiguous and non-contiguous provinces. Unlike the data in the previous section, the migration estimates used here are for the population aged five years and over in 1961.

**Table 5.7 – Index of Efficiency of Net Migration of the Canadian Born and Foreign Born,  
for Contiguous and Non-contiguous Provinces, 1956-1961**

(100 times the ratio of net migration to turnover; sign indicates direction of net migration)

Province or territory	Contiguous provinces			Non-contiguous provinces			Total migration		
	Turnover	Net migration	Index	Turnover	Net migration	Index	Turnover	Net migration	Index
Canadian born									
Newfoundland .....	5,119	- 783	- 15.3	9,420	- 3,012	- 32.0	14,539	- 3,795	- 26.1
Prince Edward Island ....	4,172	156	3.7	5,415	- 1,191	- 22.0	9,587	- 1,035	- 10.8
Nova Scotia .....	15,072	- 2,618	- 17.4	40,542	- 10,300	- 25.4	55,614	- 12,918	- 23.2
New Brunswick .....	22,986	- 1,522	- 6.6	23,004	- 4,106	- 17.8	45,990	- 5,628	- 12.2
Quebec .....	88,712	- 3,722	- 4.2	24,707	807	3.3	113,419	- 2,915	- 2.6
Ontario .....	102,522	10,842	10.6	109,807	13,801	12.6	212,329	24,643	11.6
Manitoba .....	44,944	- 754	- 1.7	35,544	- 9,952	- 28.0	80,488	- 10,706	- 13.3
Saskatchewan .....	48,154	- 15,528	- 32.2	33,939	- 10,959	- 32.3	82,093	- 26,487	- 32.3
Alberta .....	70,274	9,042	12.9	44,081	7,819	17.7	114,355	16,861	14.7
British Columbia .....	39,454	- 5,140	13.0	67,512	17,278	25.6	106,966	22,418	21.0
Yukon and Northwest Territories .....	7,133	- 253	- 3.5	3,551	- 185	- 5.2	10,684	- 438	4.1
Canada .....	448,542	-		397,522	-		846,064	-	

**Table 5.7 – Index of Efficiency of Net Migration of the Canadian Born and the Foreign Born, for Contiguous and Non-contiguous Provinces, 1956-1961 – concluded**

(100 times the ratio of net migration to turnover; sign indicates direction of net migration)

Province or territory	Contiguous provinces			Non-contiguous provinces			Total migration		
	Turnover	Net migration	Index	Turnover	Net migration	Index	Turnover	Net migration	Index
Foreign born									
Newfoundland .....	371	- 63	- 17.0	663	- 219	- 33.0	1,034	- 282	- 27.3
Prince Edward Island ....	228	-	-	229	49	21.4	457	49	10.7
Nova Scotia .....	814	- 348	- 42.8	3,708	- 636	- 17.1	4,522	- 984	- 21.8
New Brunswick .....	1,240	254	20.5	1,914	- 182	- 9.5	3,154	72	2.3
Quebec .....	12,224	- 2,224	- 18.2	4,018	- 268	- 6.7	16,242	- 2,492	- 15.3
Ontario .....	15,937	3,243	20.3	15,629	153	1.0	31,566	3,396	10.8
Manitoba .....	6,149	- 687	- 11.2	5,736	- 2,494	- 43.5	11,885	- 3,181	- 26.8
Saskatchewan .....	5,302	- 1,802	- 34.0	5,615	- 2,731	- 48.6	10,917	- 4,533	- 41.5
Alberta .....	12,713	- 789	- 6.2	6,505	617	9.5	19,218	- 172	- 0.9
British Columbia .....	9,187	2,525	27.5	15,348	5,840	38.0	24,535	8,365	34.1
Yukon and Northwest Territories .....	1,107	- 109	- 9.8	411	- 129	- 31.4	1,518	- 238	15.7
Canada .....	65,272	-	2.9	59,776	-	- 3.0	125,048	-	

SOURCE: Computed from 1961 Census unpublished basic migration tabulations, Tables 9 and 10.

## TRENDS AND PATTERNS OF INTERCENSAL MIGRATION

As may be expected, there are some differences in the pattern of efficiency of migration of the Canadian born for 1956-1961 as compared with the life-time migration data for 1961 (Table 5.6). These differences indicate a change in the trend of migration during the last five years of the 1951-1961 decade. British Columbia continued to have the highest positive index; Alberta had the second highest and Ontario the third. Among the migration-losing provinces, Saskatchewan had the highest and Quebec the lowest indices.

The data for 1956-1961 indicate that interprovincial migration was more effective for the foreign born than for the Canadian born. In most provinces the index of efficiency was higher for the former group than for the latter. The efficiency index (explained in Section 5.2.1) was 19 for the foreign born and 15 for the Canadian born. Thus, the evidence suggests that migration of the foreign born was more unidirectional and more efficient than that of the Canadian born in the redistribution of population among the provinces.

The 1961 migration data permit a classification of the interprovincial migration according to whether migration occurred between contiguous or non-contiguous provinces (see footnote 8 for the classification of contiguous and non-contiguous provinces). Table 5.7 shows that in 1956-1961 interprovincial migration was more efficient between non-contiguous than between contiguous provinces, for both Canadian born and foreign born although the difference was more pronounced for migration of Canadian born. The efficiency indices for both groups by contiguous and non-contiguous provinces are:

	Contiguous provinces	Non-contiguous provinces
Canadian born .....	11.2	20.0
Foreign born .....	18.5	22.3

### 5.3 TRENDS AND PATTERNS OF INTERCENSAL MIGRATION

Except for 1956-1961, the foregoing analysis on the volume, trends and "effectiveness" of migration was based on life-time migration estimates which indicated only the cumulative effect of migration at each census without referring to any time period. This limitation could be overcome by using intercensal net migration estimates for Canadian born and foreign born obtained in Chapter Three. Because decade migration estimates are not made prior to 1931, the present analysis of the extent to which people have migrated into and out of various provinces and the net effect of these migration is confined to the period after 1931.

# INTERNAL MIGRATION IN CANADA

**Table 5.8 – Amounts and Rates of the Net Interprovincial Migration of the Canadian Born and Foreign Born, by Province, 1931-1941, 1941-1951 and 1951-1961**

NOTE. — The rates are based on the average total population (i.e., Canadian born plus foreign born).

Province or territory	Canadian born			Foreign born		
	1931-1941	1941-1951	1951-1961	1931-1941	1941-1951	1951-1961
Numbers						
Nfld. ....	—	—	— 14,675	—	—	2,731
P.E.I. ....	— 2,530	— 8,733	— 10,410	— 42	— 428	639
N.S. ....	2,102	— 37,730	— 41,143	3,577	— 5,985	9,475
N.B. ....	— 6,629	— 33,367	— 33,107	— 1,317	2,273	5,938
Que. ....	27,358	— 34,547	— 24,501	— 3,048	40,546	192,839
Ont. ....	77,441	82,981	36,479	19,433	237,678	628,805
Man. ....	— 24,263	— 53,319	— 37,694	— 13,540	12,334	37,310
Sask. ....	— 95,673	— 138,755	— 83,085	— 44,874	— 17,838	13,086
Alta. ....	— 20,526	— 4,082	31,618	— 15,772	26,452	92,653
B.C. ....	60,497	138,535	66,176	28,601	95,426	157,161
Y.T. and N.W.T. ....	982	2,904	650	522	824	2,353
Canada .....	18,759	— 86,113	— 109,692	— 26,460	392,138	1,142,990
Sum of net gain ....	+ 168,380	+ 224,420	+ 134,923	+ 52,133	+ 415,961	+ 1,142,990
Sum of net loss ....	— 149,621	— 310,533	— 244,615	— 78,593	— 23,823	—
Rates (per 1,000 population)						
Nfld. ....	—	—	— 36	—	—	7
P.E.I. ....	— 28	— 90	— 103	— 1	— 4	6
N.S. ....	4	— 62	— 60	7	— 10	14
N.B. ....	— 15	— 69	— 59	— 3	5	11
Que. ....	9	— 9	— 5	— 1	11	41
Ont. ....	21	20	7	5	57	116
Man. ....	— 34	— 71	— 44	— 19	16	44
Sask. ....	— 105	— 161	— 95	— 49	— 21	15
Alta. ....	— 27	— 5	28	— 21	30	82
B.C. ....	80	140	47	38	96	112
Y.T. and N.W.T. ....	64	138	21	34	39	75
Canada .....	2	— 7	— 7	— 2	31	71

SOURCE: Calculated using the data in Tables A.1, 3.7 and 3.12.

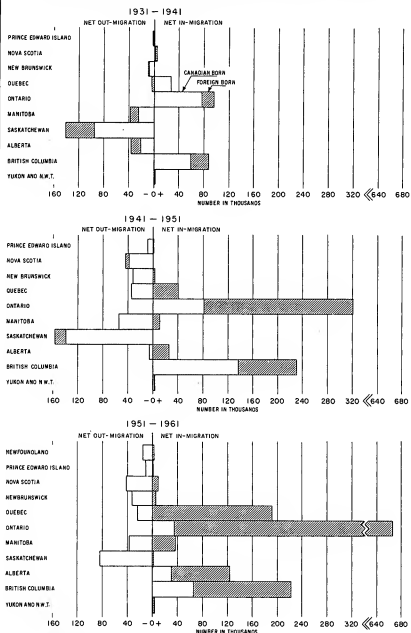
**5.3.1 DECADE MIGRATION OF THE FOREIGN BORN** – There are some variations in the provincial distribution of migration gains and losses for the foreign-born and Canadian-born populations. Decade migration data for the provinces presented in Table 5.8 and Chart 5.1 show the level (number and rate) and direction of migration of the foreign born and Canadian born. The main feature of the migration of foreign born is that the changes in the amounts of gains and losses at the provincial level followed more or less the same patterns as changes at the national level. External migration is the major component in net migration of foreign-born population. The amounts of net external migration at the national level (sum of the net migration for the provinces) for the three decades show that only during 1931-1941 was there a net loss of migration among the foreign born. In the other two decades there was a substantial gain in external migration of the foreign born. The foreign born net migration was highest in 1951-1961 with a net gain of 1,143,000 and no province losing as a result of foreign-born migration.

Ontario, British Columbia and the Yukon and Northwest Territories gained consistently as a result of foreign-born migration. The other migration gaining provinces were Nova Scotia in 1931-1941, all provinces except Nova Scotia and Saskatchewan in 1941-1951, and all provinces in 1951-1961. In 1931-1941, British Columbia alone accounted for about 55 per cent of the total gain and Ontario for 37 per cent. In the same decade, Saskatchewan was highest among the losing provinces, accounting for about 57 per cent of the total loss, followed by Alberta and Manitoba; the three Prairie Provinces together accounted for 94 per cent of the total loss of foreign-born migration. In 1941-1951 and 1951-1961, Ontario, the most industrialized province of Canada, superseded British Columbia and became the most preferred destination of the foreign-born migrants, accounting for more than half of the combined gains of all gaining provinces. British Columbia and Quebec were the other chief recipients of the foreign-born migrants in these two decades.

**5.3.2 DECADE MIGRATION OF THE CANADIAN BORN** – The provincial pattern of the Canadian-born migration, which is primarily an internal shift (Table 5.8), was, by and large, similar to that of the foreign-born migration. In order to see the association between the provincial patterns of foreign-born and native-born migration, rank correlations between the two types in the three intercensal periods were calculated. The calculation yielded correlation coefficients of 0.86 in 1931-1941, 0.64 in 1941-1951 and 0.26 in 1951-1961. The relatively low correlation in 1951-1961 was due to the extreme values for Prince Edward Island and the Yukon and Northwest Territories; excluding these two areas, the correlation coefficient was 0.61. These results suggest that net migrations of the foreign born and Canadian born for the provinces are positively associated.

CHART 5.1

AMOUNTS OF THE NET INTERPROVINCIAL MIGRATION OF THE CANADIAN BORN AND FOREIGN BORN, BY PROVINCES, CANADA, 1931-1941, 1941-1951, AND 1951-1961



The net interprovincial migration for the country as a whole represents the net international migration of the Canadian born, most of which occurred between Canada and the United States.<sup>4</sup> Because of the effect of external migration, the sums of net gains and losses of migration for the provinces were not equal. The net migration of Canadian born for Canada as a whole was a gain in 1931-1941 but a loss in each of the other decades, just the opposite of what happened for the foreign born. The net gain in 1931-1941 indicates the return migration of Canadian born who had left before 1931.

The estimates of interprovincial migration of the Canadian born (Table 5.8) show that Ontario, British Columbia, and the Yukon and Northwest Territories gained persistently through migration in all the intercensal periods, that Nova Scotia and Quebec gained in 1931-1941 and Alberta in 1951-1961. It appears that there is a relationship between the movements of the Canadian born and foreign born. For Canada as a whole, while there was an accelerating increase in the net migration of the foreign born, there was a corresponding increase in the net out-migration of the Canadian born in the three decades. It is difficult to determine whether the net out-migration of the Canadian born was caused by increased immigration or whether the out-migration of the Canadian born was responsible in any way for attracting more immigrants during 1931-1961.<sup>5</sup> Another point to be noted is that, as in the case of foreign-born migrants, Ontario and British Columbia were the main provinces of attraction for the Canadian-born migrants. Although the migration gains were higher in Ontario in 1931-1941, British Columbia had higher gains in the subsequent decades than Ontario.

The persistently losing provinces as a result of the migration of the Canadian born were Prince Edward Island, New Brunswick, Manitoba and Saskatchewan. Also, Alberta lost in 1931-1941 and 1941-1951 and Nova Scotia and Quebec in 1941-1951 and 1951-1961. Newfoundland, which was added in 1949, also lost in 1951-1961. The four persistently losing provinces accounted for most of the net losses in each decade, 86 per cent in 1931-1941, 75 per cent in 1941-1951 and 67 per cent in 1951-1961. Quebec, which became a losing province in the 1940s and 1950s, accounted for 10 to 11 per cent of the total net migration loss in the two decades.

**5.3.3 RATES OF DECADE NET MIGRATION OF THE CANADIAN BORN AND FOREIGN BORN** - The rates of net migration of the Canadian born and foreign born are also presented in Table 5.8. For the purpose of comparison attempted in this section, the rates are based on the decade average total population (Canadian born plus foreign born) of each province, and indicate the impact of migration of each type on the total population growth of the gaining or losing province rather than a segment of it. In interpreting these rates, the effect of a small base population on the rates should be kept in mind.<sup>6</sup> However, because the base population used here

is the total population rather than a part of it, the rates are likely to be less affected by the base population size.

For Canada as a whole, there was an upward trend in the net out-migration rates of the Canadian born and net in-migration rates of the foreign born (including immigration) during the three periods. In 1931-1941, Canada gained through Canadian-born migration and lost through foreign-born migration. The pattern of change in the net migration rates of the foreign born for the provinces in the three decades was similar to that of the national rates. This is because most of the interprovincial migration of the foreign born (Table 5.8) was the result of external migration. There was no such common pattern in the trend of the interprovincial migration of the Canadian born, which reflected mostly the internal movements.

It was noted earlier that the two principal consistently gaining provinces through the migration of the foreign born were Ontario and British Columbia. Although Ontario had higher amounts of gain than British Columbia, migration rates of the foreign born for the latter were higher than those for the former. These two provinces gained consistently through the migration of the Canadian born as well. British Columbia had higher rates of migration than Ontario in all the decades despite the fact that the amount of net migration of the Canadian born in 1931-1941 was higher for Ontario than for British Columbia. Among the four persistently losing provinces through the migration of Canadian born, Saskatchewan had the highest rate in 1931-1941 and 1941-1951 but Prince Edward Island had the highest rate in 1951-1961.

**5.3.4 ATTRACTION AND IMPACT OF INTERPROVINCIAL MIGRATION OF THE CANADIAN BORN** - As noted earlier, the estimates of interprovincial migration for the Canadian born (Table 5.8) are not purely internal due to the effect of external migration. Because the net migration estimates are available for the in-born and out-born population of each province (Appendix Table A.1), it is possible to separate the effect of external migration and derive net migration of a purely internal nature for each province. The net external migration of the Canadian born for each province was derived by taking the difference between *total* net migration of the in-born population (out-migration including those who went outside Canada) and the sum of net migration of the in-born population for each province and residing in other provinces. As stated earlier, most of the external net migration of the Canadian born was between Canada and the United States. This can be seen by comparing the estimates of total net migration and net migration between Canada and the United States (estimated separately by applying the appropriate survival ratios to the Canadian-born population living in the United States) for the three decades. The relevant figures for comparison are:

*TRENDS AND PATTERNS OF INTERCENSAL MIGRATION*

	<u>1931 - 1941</u>	<u>1941 - 1951</u>	<u>1951 - 1961</u>
Total external migration .....	18,759	- 86,113	- 109,692
Net migration between Canada and the United States .....	18,534	- 82,810	- 109,760
Absolute difference .....	226	3,302	65

The estimates of net balance of internal migration (i.e., excluding the net external migration) for the Canadian-born population by province are presented in Table 5.9. From these estimates, it is possible to derive directly the amount of population redistribution or displacement resulting from the migration of the Canadian born by summing the net gains or losses, by provinces, for each intercensal period. The sums of both the net gains or losses are equal, and both are measures of interprovincial redistribution resulting from the migration of the Canadian-born population. The amounts of redistribution thus obtained, and the redistribution rates per 1,000 average Canadian-born population of the intercensal period are:

	<u>1931 - 1941</u>	<u>1941 - 1951</u>	<u>1951 - 1961</u>
Amount of redistribution .....	130,247	258,401	185,888
Rate of redistribution .....	15	24	14

The rates of redistribution for the Canadian-born population approximate the rates obtained by an indirect method in Table 4.6 (18 for 1931-1941, 25 for 1941-1951, and 14 for 1951-1961).

**Table 5.9 - Net Interprovincial Migration of the Canadian Born,  
by Province, 1931 - 1941, 1941 - 1951 and 1951 - 1961**

(Migration within Canada only)

Province or territory	<u>1931 - 1941</u>	<u>1941 - 1951</u>	<u>1951 - 1961</u>
	No.	No.	No.
Newfoundland .....	-	-	- 10,035
Prince Edward Island .....	- 3,085	- 8,484	- 10,295
Nova Scotia .....	558	- 27,676	- 34,487
New Brunswick .....	- 8,921	- 28,677	- 29,331
Quebec .....	7,620	- 22,427	- 4,854
Ontario .....	62,076	106,837	74,766
Manitoba .....	- 19,648	- 44,548	- 27,688
Saskatchewan .....	- 84,912	- 126,589	- 69,198
Alberta .....	- 13,681	5,283	41,790
British Columbia .....	59,165	143,226	68,353
Yukon and Northwest Terri- tories .....	828	3,055	979
Sum of net gain or loss .....	<b>130,247</b>	<b>258,401</b>	<b>185,888</b>

SOURCE: Explained in the text, Section 5.3.4.

## INTERNAL MIGRATION IN CANADA

Because the migration figures given in Table 5.9 refer to internal movements only, a migration loss or gain in one province is a gain or loss elsewhere, and for the country as a whole the net gain or loss will be zero. It is possible thus to divide the country into two parts, by grouping the provinces into gaining and losing provinces. The combined rates of gain for all gaining provinces and the combined rates of loss for all losing provinces per 1,000 average Canadian-born population of the gaining and losing provinces, respectively, for each decade are:

	1931 - 1941	1941 - 1951	1951 - 1961
Gaining provinces .....	19	55	30
Losing provinces .....	- 62	- 43	- 25

The numerators of the two rates are the same for any intercensal period, and these rates are the weighted averages of provincial rates of gains and losses. Except in 1931 - 1941, the level of rates of gain was above the level of rates of loss. The lower rate of gain for 1931 - 1941 was due to Quebec which was a gaining province during this decade alone and had the largest average population. There is no clear trend shown by the rates of gain, but the rates of loss moved steadily downward. According to Eldridge and Thomas (1964, pp. 79 and 80), "... the rates of migration gain based upon the gaining population are measures of impact, pertinent to the analysis of the effect of migration upon the growth of the receiving population, but that, changes in the rate of gain may be quite independent of the drawing power of the receiving area or of the tendency to move to that area. Negative rates in general may be taken as measures of the attraction that other areas have for the population of the losing area ...." If the rates are interpreted on the basis of this thesis, they indicate that the attractive power of the gaining provinces upon the losing provinces decreased between 1931 and 1961, and that the impact of net migration gain of the Canadian-born population upon the gaining provinces increased between 1931 and 1951 but decreased during 1951 - 1961.

### 5.4 MIGRATION DURING 1956 - 1961

The migration data collected in the 1961 Census provide information on the extent and patterns of migration during 1956 - 1961. The data relate to the population living in an area at the date of the 1961 Census, that is, the end of the migration period. The population is classified into non-movers and movers, and the movers are divided into subgroups according to the type of move, such as intramunicipal, intraprovincial, interprovincial, etc. Such classification yields a percentage distribution of the population that indicates the proportion in each category of movers, as well as the proportion of non-movers and the proportion of migrants from abroad. The relevant data are presented in Table 5.10.

Table 5.10 - Percentage Distribution of Population Aged Five and Over, by Type of Movement and by Province, 1956-1961

Province or territory	Total population (Aged five and over in 1961)	Non-movers	Movers within Canada					Migrants from abroad
			Total movers	Within the same municipality	From different municipality			
					Within the same province	From different province	Moved but place of residence in 1956 not stated	
	No.							
Newfoundland .....	376,812	72.5	27.1	17.9	7.4	1.6	0.2	0.4
Prince Edward Island .....	87,928	71.2	28.0	13.7	8.5	5.6	0.2	0.8
Nova Scotia .....	614,627	65.9	33.0	18.3	10.5	4.0	0.2	1.1
New Brunswick .....	497,203	66.6	32.6	17.6	9.9	4.9	0.2	0.8
Quebec .....	4,378,851	55.5	42.6	27.6	13.3	1.5	0.2	1.9
Ontario .....	5,302,994	52.1	43.1	26.0	14.1	2.8	0.2	4.8
Manitoba .....	775,117	56.2	41.2	24.8	10.8	5.4	0.2	2.6
Saskatchewan .....	777,621	60.5	38.5	20.6	13.4	4.2	0.3	1.0
Alberta .....	1,099,902	47.7	48.8	26.1	15.1	7.3	0.3	3.5
British Columbia .....	1,364,753	47.1	49.0	25.9	16.6	6.4	0.1	3.9
Yukon and Northwest Territories ...	26,813	31.6	65.2	29.8	12.0	23.3	0.1	3.2
Canada .....	15,302,621	54.6	42.4	25.2	13.5	3.4	0.2	3.1

SOURCE: 1961 Census, Bul. 4.1 - 9, Table 11-1.

Table 5.11 - Interprovincial Migration of the Canadian Born and Foreign Born, by Contiguous and Non-contiguous Provinces, 1956-1961

Province or territory	Contiguous provinces			Non-contiguous provinces			Total migration		
	In-migrants	Out-migrants	Net migration	In-migrants	Out-migrants	Net migration	In-migrants	Out-migrants	Net migration
Canadian born									
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland .....	2,168	2,951	- 783	3,204	6,216	- 3,012	5,372	9,167	- 3,795
Prince Edward Island ....	2,164	2,008	156	2,112	3,303	- 1,191	4,276	5,311	- 1,035
Nova Scotia .....	6,227	8,845	- 2,618	15,121	25,421	- 10,300	21,348	34,266	- 12,918
New Brunswick .....	10,732	12,254	- 1,522	9,449	13,555	- 4,106	20,181	25,809	- 5,628
Quebec .....	42,495	46,217	- 3,722	12,757	11,950	807	55,252	58,167	- 2,915
Ontario .....	56,682	45,840	10,842	61,804	48,003	13,801	118,486	93,843	24,643
Manitoba .....	22,095	22,849	- 754	12,796	22,748	- 9,952	34,891	45,597	- 10,706
Saskatchewan .....	16,313	31,841	- 15,528	11,490	22,449	- 10,959	27,803	54,290	- 26,487
Alberta .....	39,658	30,616	9,042	25,950	18,131	7,819	65,608	48,747	16,861
British Columbia .....	22,297	17,157	5,140	42,395	25,117	17,278	64,692	42,274	22,418
Yukon and Northwest Territories .....	3,440	3,693	- 253	1,683	1,868	- 185	5,123	5,561	- 438
Canada .....	224,271	224,271	-	198,761	198,761	-	423,032	423,032	-

	Foreign born								
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland .....	154	217	- 63	222	441	- 219	376	658	- 282
Prince Edward Island ....	114	114	-	139	90	49	253	204	49
Nova Scotia .....	233	581	- 348	1,536	2,172	- 636	1,769	2,753	- 984
New Brunswick .....	747	493	254	866	1,048	- 182	1,613	1,541	72
Quebec .....	5,000	7,224	- 2,224	1,875	2,143	- 268	6,875	9,367	- 2,492
Ontario .....	9,590	6,347	3,243	7,891	7,738	153	17,481	14,085	3,396
Manitoba .....	2,731	3,418	- 687	1,621	4,115	- 2,494	4,352	7,533	- 3,181
Saskatchewan .....	1,750	3,552	- 1,802	1,442	4,173	- 2,731	3,192	7,725	- 4,533
Alberta .....	5,962	6,751	- 789	3,561	2,944	617	9,523	9,695	- 172
British Columbia .....	5,856	3,331	2,525	10,594	4,754	5,840	16,450	8,085	8,365
Yukon and Northwest Territories .....	499	608	- 109	141	270	- 129	640	878	- 238
Canada .....	32,636	30,812	1,824	29,888	31,712	- 1,824	62,524	62,524	-

SOURCE: Same as Table 5.7.

## INTERNAL MIGRATION IN CANADA

**Table 5.12 – In-, Out- and Net Migration Rates and Turnover Rates of Canadian Born and Foreign Born, Aged Five and Over, by Province, 1956- 1961**

(Per 1,000 sample total population 5 years and over in 1961)

Province or territory	Per cent of sample total population 5+ in 1961	Canadian born				Foreign born			
		In-mi-grants	Out-mi-grants	Net mi-gration	Turn-over	In-mi-grants	Out-mi-grants	Net mi-gration	Turn-over
Nfld. ....	2.5	14	24	- 10	39	1	2	- 1	3
P.E.I. ....	0.6	49	60	- 12	109	3	2	1	5
N.S. ....	4.0	35	56	- 21	91	3	4	- 1	7
N.B. ....	3.2	41	52	- 11	93	3	3	0	6
Que. ....	28.6	13	13	- 1	26	2	2	- 1	4
Ont. ....	34.6	22	18	5	40	3	3	1	6
Man. ....	5.1	45	59	- 14	104	6	10	- 4	16
Sask. ....	5.1	36	70	- 34	106	4	10	- 6	14
Alta. ....	7.2	60	44	15	104	9	9	- 0	18
B.C. ....	8.9	47	31	16	78	12	6	6	18
Y.T. and N.W.T.	0.2	191	207	- 16	398	24	33	- 9	57
Canada .....	100.0	28	28	-	56	4	4	-	8

SOURCE: Computed from 1961 Census unpublished basic migration tabulations, Tables 9 and 10.

During 1956- 1961, 6,484,000 or 42.4 per cent of the population aged five years and over in 1961 changed residences within Canada. Of the total movers, about 60 per cent moved within the same municipality, 32 per cent within the same province, and eight per cent between provinces. Thus, the majority were short-distance movers, that is, local movers and intraprovincial movers. The migrants from abroad constituted about three per cent of the total population. More than half of the total migrants to Canada during this period were residing in Ontario in 1961.

Excluding the Yukon and Northwest Territories, the percentage distributions of movers among the provinces (Table 5.10) indicate a positive association between population size and the amounts of total, intramunicipal and intraprovincial migration. Such a pattern was not found for interprovincial migrants. Because of the limited scope for intraprovincial and intramunicipal migration in the Yukon and Northwest Territories, their proportions of interprovincial migration were higher than those of the provinces.

By and large, the western provinces had higher proportions of interprovincial migration than other provinces, and Quebec, followed by Newfoundland and Ontario, had the lowest.

In view of the emphasis on the analysis of interprovincial migration in this study, the remainder of the analysis is confined to the levels and patterns of interprovincial migration between 1956 and 1961. The data are available separately for Canadian-born and foreign-born populations, and relate only to migration within Canada.

The amounts and rates of interprovincial migration of the Canadian born and foreign born aged five and over for 1956-1961 are presented in Tables 5.11 and 5.12. Although these figures are not strictly comparable with the net migration estimates of the Canadian born for 1951-1961 given in Table 5.9, it may be useful to see whether there is any change in the direction of interprovincial migration during 1956-1961 as compared with the corresponding net migration estimates for 1951-1961 (Table 5.9). Except for the Yukon and Northwest Territories, there was no change in the direction of interprovincial migration for the population aged five and over during 1956-1961. The Yukon and Northwest Territories, which consistently gained after 1931, had a net out-migration during 1956-1961.

**5.4.1 IN- AND OUT-MIGRATION AND POPULATION TURNOVER OF THE CANADIAN BORN** - During 1956-1961, 423,032 Canadian-born persons, aged five and over in 1961 changed their province of residence. This group represented 2.8 per cent of the total sample population aged five and over in 1961. For individual provinces, the total migration consisted of inward and outward movements, the extent of which varied from province to province. The number of in-migrants of the Canadian born was highest in Ontario, followed by Alberta, British Columbia and Quebec. The patterns of the amounts of in-migration were different in terms of in-migration rates. Quebec, Newfoundland and Ontario had rates lower than the national rate; the Yukon and Northwest Territories had the highest in-migration rate, followed by Alberta, Prince Edward Island and British Columbia.

The provinces that sent most of the out-migrants were Ontario, Quebec, Saskatchewan, Alberta and British Columbia. Except for Saskatchewan, these were also the main provinces that attracted in-migrants. The rates of out-migration, however, showed a different pattern. Quebec, which had the lowest in-migration rate, also had the lowest out-migration rate and Quebec, Ontario and Newfoundland had out-migration rates below the national rate. The out-migration rates were highest in the Yukon and Northwest Territories, followed by Saskatchewan, Prince Edward Island, Manitoba, Nova Scotia and New Brunswick.

The "turnover" of population (the sum of in-migrants and out-migrants) indicates the total exchange of population for each province. Population turnover is higher for provinces with high in-migration and high out-migration and lower for provinces with low in-migration and low out-migration. Turnover was highest in Ontario followed by Alberta, British Columbia and Quebec, and lowest in Prince Edward Island, the Yukon and Northwest Territories, and Newfoundland. The turnover rate, which indicates the effect of total migratory movements on the total population of the provinces, was highest for the Yukon and Northwest Territories and lowest for Quebec. Quebec, Newfoundland and Ontario had lower rates than the national rate of 56 per 1,000 total population of Canada.

The foregoing analysis suggests that there is a negative association among the provinces between the size of population, and in- and out-migration rates and turnover rates. For example, the Yukon and Northwest Territories with the smallest population size had the highest in- and out-migration rates and turnover rates; Ontario with the largest population size had one of the lowest corresponding rates. The rank correlation coefficients between population size and in- and out-migration rates and turnover rates were  $-0.39$ ,  $-0.68$  and  $-0.58$ , respectively. Because both in-migration and out-migration rates are negatively correlated with population size, these two rates should be positively correlated. The rank correlation coefficient between in-migration and out-migration rates was  $0.65$  for the provinces in 1956-1961. Such an association suggests the possibility of some sort of an "intrinsic relationship" between in- and out-migration rates for an area.<sup>7</sup> According to Shryock (1964, p. 195), part of this relationship arises from the counter streams of return migrants that are generated by streams of both in- and out-migration rates for an area.

**5.4.2 INTERPROVINCIAL NET MIGRATION OF THE CANADIAN BORN** - As noted earlier, the direction of net migration for provinces in 1956-1961 was similar to the net migration for 1951-1961. Only three provinces - Ontario, British Columbia and Alberta - gained during 1956-1961. Net losses were greatest in Saskatchewan, followed by Nova Scotia and Manitoba. Each of the Atlantic Provinces had a net out-migration of Canadian born in 1956-1961.

In terms of rates, the net in-migration rate was highest in British Columbia and lowest in Ontario. Ontario, with the largest population size in 1961 had a rate of only five per 1,000 total population. Among the losing provinces, the rate was highest in Saskatchewan and lowest in Quebec, which had the second largest population size in 1961.

The net displacement or redistribution due to the migration of the Canadian-born population in 1956-1961 was 63,922 (sum of net migration gain or loss), which amounted to about four per 1,000 total sample population aged five and over in 1961.

**5.4.3 MIGRATION OF THE FOREIGN BORN** - In view of the small size of the foreign-born population, a smaller migration of the foreign-born migrants is expected than of Canadian-born migrants; the total in- or out-migration of the Canadian-born population in 1956-1961 was 423,032 and the corresponding amount of the foreign born was 62,524. The rate of total migration per 1,000 total population (Canadian born plus foreign born) aged five and over was 28 for the former and four for the latter.

It was noted earlier (Section 5.3.2), that there was a significant positive relationship between decade interprovincial net migration of the Canadian-born and the foreign-born population. This relationship was also valid in 1956-1961. The coefficients of rank correlation between the two groups for in-, out- and net migration rates were 0.68, 0.70 and 0.78, respectively. British Columbia had the highest amount of net in-migration of the foreign born. The other provinces that gained were Ontario, Prince Edward Island, and New Brunswick. The net out-migration was highest in Quebec and lowest in Alberta. The net loss through out-migration of the foreign born in Quebec was 2,492 which was almost as much as the loss of Canadian born (2,915). The total displacement of population due to the migration of the foreign born was 11,882 which amounted to about one per 1,000 total sample population ("blown-up" sample) aged five and over in 1961.

The migration rates given in Table 5.12 are based on the total population aged five and over in 1961. In order to see whether the propensity to migrate is greater among the Canadian born than among the foreign born, and to examine the effects of the two types of migration on the population of each group, turnover rates and net migration rates per 1,000 population of the group concerned were computed and compared.

The rates suggest that, on the whole, the foreign-born population tends to be more mobile than the Canadian-born population. This may be expected in view of the fact that foreign-born persons had already experienced migration and the inhibiting factors of migration, such as attachment to the place of birth, proximity to friends and relatives, are not generally applicable in their case. Economic motivation is likely to be the main factor inducing the foreign born to migrate.

**5.4.4 MIGRATION BETWEEN CONTIGUOUS AND NON-CONTIGUOUS PROVINCES** - It is observed in Section 5.2.2 that interprovincial migration was more effective for the migration between non-contiguous provinces than between contiguous provinces.<sup>8</sup> The object here is to examine the extent of interprovincial in-migration from, and out-migration to contiguous and non-contiguous provinces, and to see whether there is any relationship between distance and internal migration. The limitations of this approach in studying the effect of distance on migration should be kept in mind in interpreting the data. The size and location of a province affect the total migration

**Table 5.13 – Proportion of In-migrants from and Out-migrants to Contiguous and Non-contiguous Provinces, Canadian Born and Foreign Born, 1956- 1961**

Province or territory	In-migrants			Out-migrants		
	Contig-uous	Non-contig-uous	Total	Contig-uous	Non-contig-uous	Total
Canadian born						
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Newfoundland .....	40.4	59.6	100.0	32.2	67.8	100.0
Prince Edward Island ....	50.6	49.4	100.0	37.8	62.2	100.0
Nova Scotia .....	29.2	70.8	100.0	25.8	74.2	100.0
New Brunswick .....	53.2	46.8	100.0	47.5	52.5	100.0
Quebec .....	76.9	23.1	100.0	79.5	20.5	100.0
Ontario .....	47.8	52.2	100.0	48.8	51.2	100.0
Manitoba .....	63.3	36.7	100.0	50.1	49.9	100.0
Saskatchewan .....	58.7	41.3	100.0	58.6	41.4	100.0
Alberta .....	60.4	39.6	100.0	62.8	37.2	100.0
British Columbia .....	34.5	65.5	100.0	40.6	59.4	100.0
Yukon and Northwest Ter- ritories .....	67.1	32.9	100.0	66.4	33.6	100.0
<b>Canada .....</b>	<b>53.0</b>	<b>47.0</b>	<b>100.0</b>	<b>53.0</b>	<b>47.0</b>	<b>100.0</b>
Foreign born						
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Newfoundland .....	41.0	59.0	100.0	33.0	67.0	100.0
Prince Edward Island ....	45.1	54.9	100.0	55.9	44.1	100.0
Nova Scotia .....	13.2	86.8	100.0	21.1	78.9	100.0
New Brunswick .....	46.3	53.7	100.0	32.0	68.0	100.0
Quebec .....	72.7	27.3	100.0	77.1	22.9	100.0
Ontario .....	54.9	45.1	100.0	45.1	54.9	100.0
Manitoba .....	62.7	37.3	100.0	45.4	54.6	100.0
Saskatchewan .....	54.8	45.2	100.0	46.0	54.0	100.0
Alberta .....	62.6	37.4	100.0	69.6	30.4	100.0
British Columbia .....	35.6	64.4	100.0	41.2	58.8	100.0
Yukon and Northwest Ter- ritories .....	78.0	22.0	100.0	69.2	30.8	100.0
<b>Canada .....</b>	<b>52.2</b>	<b>47.8</b>	<b>100.0</b>	<b>52.2</b>	<b>47.8</b>	<b>100.0</b>

SOURCE: Computed from 1961 Census unpublished basic migration tabulations, Tables 9 and 10.

from contiguous and non-contiguous provinces. Much of the intraprovincial movements for a large province would likely be interprovincial migration for a small province, and most of it would be migration between contiguous provinces. Also, large provinces close to an ocean or international boundary have fewer contiguous provinces than smaller provinces surrounded by others. For example, British Columbia has only two contiguous provinces (including the Yukon and Northwest Territories), but each of the Atlantic Provinces has three contiguous provinces.

The data in Table 5.13 for 1956-1961 show that for the Canadian born and foreign born, the proportion of migration between contiguous provinces tends to be higher than migration between non-contiguous provinces. For the Canadian born, the proportion of in-migrants from contiguous provinces was higher than from non-contiguous provinces for Prince Edward Island, New Brunswick, Quebec, Manitoba, Saskatchewan, Alberta and the Yukon and Northwest Territories. Except for Prince Edward Island and New Brunswick, each also had a higher proportion of out-migration to contiguous provinces than to non-contiguous provinces. According to Shryock (1964, p. 195), in reference to the United States, "States must be expected to have a particularly low in-migration rate from contiguous states if part of their perimeter is a foreign country or an ocean". Such a pattern is almost impossible for Canada because for all the provinces the perimeter includes either a foreign country or an ocean or both. However, the data in Table 5.12 show a somewhat similar pattern. Newfoundland, Nova Scotia, Ontario and British Columbia, which are more exposed to an ocean or a foreign country, had lesser proportions of in-migrants from, and out-migrants to contiguous provinces. Unlike the Canadian born, there was hardly any consistent pattern of migration between contiguous and non-contiguous provinces for the foreign born.

## 5.5 SUMMARY

The rate of interprovincial migration in Canada was lower than the rate of interstate migration in the United States; the over-all trend in the proportion of interprovincial migration in Canada since 1901 was upward, indicating that Canadians, in general, have become increasingly mobile since 1901. The life-time migration data for the Canadian-born population show that some provinces that gained through migration in the early years of this century became losing provinces in the later years, and vice versa. Interprovincial migration was highest in 1901-1911 and lowest in 1931-1941. Alberta, British Columbia and the Yukon and Northwest Territories had net migration during the entire 60-year period but the Atlantic Provinces and Quebec were consistent losers. Ontario, which was a losing province up to 1941, became a gaining province in 1941-1951 and 1951-1961, with the highest amount of net in-migration in 1951-1961.

The substantial proportion of foreign-born population in Canada has affected the growth and redistribution of the total population. Variations in the number and proportion of foreign born were mainly caused by variations in the amount of immigration. Among the provinces, Ontario has always had the highest proportion of foreign-born population. British Columbia, which had a fairly constant proportion of foreign born since 1901, had the second highest proportion in 1961.

The efficiency of interprovincial migration was highest in British Columbia, which suggests that migration was more unidirectional there than in other provinces. The efficiency of interprovincial migration of the foreign born and Canadian born shows that migration was more effective for the former than for the latter, indicating that migration of the foreign born was more unidirectional and more efficient than that of the Canadian born in redistributing population among the provinces. Further, interprovincial migration was more efficient between non-contiguous than between contiguous provinces.

Estimates of intercensal net migration for the foreign born, which include external migration, show that changes in the gains and losses at the provincial level followed more or less the same pattern as changes at the national level, indicating that external migration was the major component of the net migration of the foreign born; only during 1931-1941 was there a net loss through migration among the foreign born. An examination of the association between the decade net migration of the Canadian born and foreign born for the provinces showed that both types of migration were positively correlated.

The pattern of migration by the decade net migration estimates was somewhat similar to the pattern shown by the life-time migration estimates for most provinces. The notable difference was in Quebec where the decade net migration estimates showed a gain in 1931-1941. Ontario, British Columbia and the Yukon and Northwest Territories gained persistently through migration of Canadian born in all intercensal periods, while Prince Edward Island, New Brunswick, Manitoba and Saskatchewan persistently lost through migration.

The rates of migration indicate the impact of migration on the population growth of the area concerned. For Canada as a whole, the rates show an upward trend in the net out-migration of the Canadian born and net in-migration of the foreign born (including immigration) during the three decades. Of the provinces, British Columbia had the highest rates of migration. An examination of the trend in the interprovincial migration of the Canadian born indicated that the attractive power of the migration gaining provinces upon the losing provinces was decreasing between 1931 and 1961

and that the impact of net migration gain upon the gaining provinces was increasing between 1931 and 1951 but decreased during 1951-1961.

The total internal migrants in Canada between 1956 and 1961 constituted 42.4 per cent of the population aged five and over in 1961. Of these, 60 per cent were intramunicipal, 32 per cent were intraprovincial and eight per cent were interprovincial migrants. Comparison of the interprovincial migration data for 1956-1961 with 1951-1961 migration estimates showed no change in the direction of interprovincial migration during 1956-1961. The data also indicated a negative association among the provinces between the size of population, and in- and out-migration rates and turnover rates.

As shown by the intercensal migration estimates of the Canadian born and foreign born, the 1961 migration data for 1956-1961 indicated a positive relationship between migration rates of the Canadian born and foreign born. Also, the analysis of data for the provinces for both Canadian born and foreign born indicated that the proportion of migration between contiguous provinces tends to be higher than the proportion between non-contiguous provinces.

## FOOTNOTES TO CHAPTER FIVE

<sup>1</sup> According to Shryock (1964, p. 179), gross migration is population "turn-over".

<sup>2</sup> Various estimates of total emigration (Canadian born and foreign born) for different intercensal periods are available (Camu, Weeks, and Sametz, 1964, Tables 3.1 and 3.2).

<sup>3</sup> Thomas used the term "effectiveness" for "efficiency" and calls it "un-compensated migration", which is shown as a percentage of net migration to the sum of in-migrants and out-migrants. "Compensated migration" is the remainder, either in-migrants or out-migrants, whichever is smaller, times two. A similar measure, "a coefficient to show the ratio of net migration to gross migration  $M_e$ " was used by Kosinski (1968, p. 106).

<sup>4</sup> This point is mentioned in Chapter Two. For further evidence, see Camu, Weeks, and Sametz, 1964, p. 58; DBS, *The Canadian Born in the United States*, Reference Paper No. 71, 1956.

<sup>5</sup> A similar relationship was observed in the migration of the native born and foreign born in the United States after 1880 and until the end of the era of heavy immigration (Eldridge and Thomas, 1964, pp. 71 and 72).

<sup>6</sup> Shryock (1964, p. 194) observed a negative relationship between population size and migration rates.

<sup>7</sup> Such relationships were observed by Shryock (1964, pp. 194-195) in the study of interstate population mobility in the United States for the period 1949-1950.

# *INTERNAL MIGRATION IN CANADA*

<sup>a</sup> In the 1961 Census, the classification of contiguous and non-contiguous provinces was:

<u>Province</u>	<u>Contiguous provinces</u>
Newfoundland .....	P.E.I., N.S., Que.
Prince Edward Island .....	Nfld., N.S., N.B.
Nova Scotia .....	Nfld., P.E.I., N.B.
New Brunswick .....	P.E.I., N.S., Que.
Quebec .....	Nfld., N.B., Ont.
Ontario .....	Que., Man.
Manitoba .....	Ont., Sask., Y.T. and N.W.T.
Saskatchewan .....	Man., Alta., Y.T. and N.W.T.
Alberta .....	Sask., B.C., Y.T. and N.W.T.
British Columbia .....	Alta., Y.T. and N.W.T.
Yukon and Northwest Territories .....	Man., Alta., Sask., B.C.

## *Chapter Six*

# **MIGRATION STREAMS: ORIGIN AND DESTINATION OF MIGRANTS**

According to Dorothy Thomas who introduced the concept of migration streams into American demography, from a sociological point of view, the differentiation of the various streams of migration and the determination both of the numbers involved and of the various demographic, economic and social characteristics of the migrants is equally as important as the determination of the balance or imbalance of in- and out-migration (Thomas, 1936; Bogue, Shryock, and Hoermann, 1957, p. 6). In this chapter the main "currents" or streams of interprovincial and rural-urban migration are examined.

### **6.1 PLAN OF ANALYSIS**

To identify the dominant streams of migration in terms of their volume, direction and age-sex selectivity, the intercensal net migration estimates, obtained from place of birth data, and the 1961 migration data have been analyzed. There are 110 possible individual interprovincial migration streams (taking the Yukon and Northwest Territories as a province) and, as far as possible, all the important streams are considered in the present analysis. In addition, the flows of migration among urban and rural areas are examined, using the 1961 migration data. Interprovincial migration streams are composed of rural-urban streams and an exploration of these streams is necessary to understand and interpret interprovincial streams. There are nine possible streams of migration among rural and urban areas according to the three types of urban-rural residence in the 1961 Census (urban, rural non-farm and rural farm), all of which are also explored in this chapter.

### **6.2 PROBLEMS OF INTERPRETATION OF DECADE MIGRATION ESTIMATES DERIVED FROM PLACE-OF-BIRTH DATA**

Of the intercensal migration estimates for 1931-1961 prepared in Chapter Three, only the migration estimates of the Canadian born are useful for stream analysis. For most of the discussion of interprovincial

## INTERNAL MIGRATION IN CANADA

**Table 6.1 – Intercensal Net Migration of Population Aged 10 and Over,  
by Province of Birth and Province of Residence,  
1931-1941, 1941-1951 and 1951-1961**

No.	Province of birth	Province of residence				
		Nfld.	P.E.I.	N.S.	N.B.	Que.
1931-1941						
		No.	No.	No.	No.	No.
1	Prince Edward Island .....	...	—	1,067	574	862
2	Nova Scotia .....	...	64	—	1,321	2,581
3	New Brunswick .....	...	57	2,502	—	5,475
4	Quebec .....	...	52	1,062	— 169	—
5	Ontario .....	...	87	1,683	658	14,289
6	Manitoba .....	...	23	554	147	1,860
7	Saskatchewan .....	...	32	512	185	1,882
8	Alberta .....	...	26	374	65	1,026
9	British Columbia .....	...	21	246	81	518
10	Yukon and Northwest Territories.	...	—	5	4	116
11	Totals .....	...	362	8,005	2,866	28,609
1941-1951						
		No.	No.	No.	No.	No.
12	Prince Edward Island .....	...	—	1,864	1,258	1,200
13	Nova Scotia .....	...	534	—	3,743	3,881
14	New Brunswick .....	...	327	4,109	—	9,229
15	Quebec .....	...	94	1,139	1,810	—
16	Ontario .....	...	323	3,286	627	17,112
17	Manitoba .....	...	70	208	81	2,274
18	Saskatchewan .....	...	128	655	188	1,976
19	Alberta .....	...	61	371	116	827
20	British Columbia .....	...	39	406	37	1,440
21	Yukon and Northwest Territories.	...	1	5	— 3	65
22	Totals .....	...	1,577	12,043	7,857	38,004
1951-1961						
		No.	No.	No.	No.	No.
23	Newfoundland .....	—	40	2,208	692	930
24	Prince Edward Island .....	— 47	—	1,287	1,144	606
25	Nova Scotia .....	969	521	—	5,665	3,987
26	New Brunswick .....	452	247	1,950	—	13,963
27	Quebec .....	780	7	2,096	1,537	—
28	Ontario .....	577	— 82	5,040	2,580	17,271
29	Manitoba .....	144	10	637	477	1,916
30	Saskatchewan .....	108	— 54	579	352	1,519
31	Alberta .....	95	— 55	628	232	1,330
32	British Columbia .....	101	— 26	396	243	1,155
33	Yukon and Northwest Territories.	4	— 1	6	22	102
34	Totals .....	3,183	607	14,827	12,944	42,779

SOURCE: Derived from Table A.1.

**Table 6.1 – Intercensal Net Migration of Population Aged 10 and Over,  
by Province of Birth and Province of Residence,  
1931-1941, 1941-1951 and 1951-1961**

Province of residence							No.
Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.	Total	
1931-1941							
No.	No.	No.	No.	No.	No.	No.	
922	58	- 280	8	227	9	3,447	1
3,634	- 52	- 837	- 416	1,132	20	7,447	2
3,324	- 19	- 326	- 90	852	12	11,787	3
19,875	290	- 1,477	- 296	2,210	- 558	20,989	4
-	- 1,073	- 11,745	- 2,005	9,249	229	11,372	5
18,934	-	- 5,672	1,525	10,784	120	28,275	6
19,668	8,604	-	8,693	23,812	228	63,616	7
4,952	711	- 688	-	13,618	753	20,837	8
2,095	138	- 311	- 286	-	304	2,806	9
45	- 31	40	23	87	-	289	10
73,449	8,626	- 21,296	7,156	61,971	1,117	170,865	11
1941-1951							
No.	No.	No.	No.	No.	No.	No.	
4,459	117	- 128	373	897	21	10,061	12
25,158	582	- 140	1,620	4,134	207	39,719	13
18,869	381	- 62	883	2,701	97	36,534	14
48,083	964	- 728	2,427	6,374	268	60,431	15
-	1,024	- 4,828	5,812	24,392	828	48,576	16
20,914	-	- 1,334	6,729	30,318	512	59,772	17
23,201	10,045	-	26,326	56,704	872	120,095	18
6,391	1,159	707	-	32,631	711	42,974	19
8,299	899	10	3,809	-	236	15,175	20
39	53	9	278	250	-	697	21
155,413	15,224	- 6,494	48,257	158,401	3,752	434,034	22
1951-1961							
No.	No.	No.	No.	No.	No.	No.	
7,743	339	107	458	637	64	13,218	23
6,070	222	99	784	693	42	10,900	24
29,377	1,612	521	2,652	3,841	169	49,314	25
21,076	877	287	1,569	1,713	141	42,275	26
34,624	1,301	479	2,708	3,930	171	47,633	27
-	5,139	1,228	11,401	15,428	214	58,796	28
12,544	-	1,774	12,308	15,265	222	45,297	29
10,747	5,814	-	32,514	24,870	491	76,940	30
5,691	1,329	2,384	-	15,932	591	28,157	31
5,402	861	657	5,344	-	227	14,360	32
288	115	204	209	404	-	1,353	33
133,562	17,609	7,740	69,947	82,713	2,332	388,243	34

migration in the earlier chapters the data used were the intercensal net balance of migration obtained from place-of-birth data, i.e., *total changes* due to the migration of each province's in-born population with respect to each province of residence. Province by province details are explored in the present chapter and the individual interprovincial migration streams are studied. However, these data do not give a full account of migration flows, and present certain problems of interpretation because the data for out-migration from the provinces are in terms of nativity rather than of former residence. When out-migration of a person of a given province is from his province of birth (i.e., primary migration), no problem arises but when a person migrates from a province other than his province of birth it is not always possible to determine precisely from whence he moved. Thus, a brief evaluation of the intercensal migration estimates is necessary to establish their usefulness in the study of the volume and direction of migration flows.

The relevant data for the study of interprovincial migration flows are presented in Appendix Table A.1, which gives information on the migration experience of each province with respect to (1) the migration of its own in-born population and (2) the migration of its own out-born population classified by province of birth. The latter information is used here for the analysis of migration streams. Table 6.1 includes the relevant data on the individual interprovincial migration flows taken from Table A.1. Strictly speaking, these data give the net gains or losses for each province through the migration of persons born in each of the other provinces during the decade concerned. They do not indicate how much a province has gained or lost from another through direct migration during an intercensal period because of the complication created by return and secondary migration.<sup>2</sup>

The vertical entries in Table 6.1 for each province give the net migration of its own out-born population and the horizontal entries give the net migration of its own in-born population. The former roughly represents net in-migration and the latter net out-migration where there are no negative entries. The negative entries limit the value of such data for stream analysis. Negative changes due to the migration of in-born are due partly to return migration (which would be in-migration to the province in question) and partly to secondary migration (which would not involve the province in question). Thus, for example, -280 in the column for Saskatchewan in 1931-1941 represents a net out-migration from Saskatchewan of 280 persons born in Prince Edward Island. It is not clear what proportion of this movement returned to Prince Edward Island but the portion that did not return to Prince Edward Island represents secondary migration. Thus, the figure -280 is equal to (a) in-migration between 1931 and 1941 to other provinces of persons born in Prince Edward Island and living in Prince Edward Island or elsewhere in 1931 minus (b) out-migration from

these other provinces of persons born in Prince Edward Island and living outside Prince Edward Island in 1931, where (b) is greater than (a). The figures for net migration of the in-born given in the last column of Table 6.1 are also affected by return migration. Thus, 3,447 is equal to (a) out-migration from Prince Edward Island between 1931 and 1941 of persons born in Prince Edward Island *minus* (b) in-migration to Prince Edward Island between 1931 and 1941 of persons born in Prince Edward Island but living elsewhere in 1931.

Adequate data do not exist for Canada for estimating the effects of secondary and return migration. An analysis of this phenomenon using the United States data for 1955-1960 indicated that secondary and return migration (non-primary) accounted for about 50 per cent of migrants among native white males aged five and over (Eldridge, 1965<sup>b</sup>, Table 2, p. 447). From Table 6.1, minimum estimates of secondary and return migration for each province with respect to all other provinces combined were approximated. For this calculation the numbers in the last column were taken as "primary" migration defined for the purpose here as net out-migration of the in-born. These numbers were subtracted from the corresponding numbers obtained by summing only the plus migration values horizontally. The residual figures, which are negative net changes due to the migration of the in-born, were taken as minimum estimates of secondary and return migration for the intercensal periods. Thus, for example, 280 (i.e., 3,727-3,447) was taken as the amount of secondary and return migration for Prince Edward Island between 1931 and 1941. The minimum estimates indicate that for Canada secondary and return migration was substantial in 1931-1941, forming about 13 per cent of the total out-migration of the Canadian born aged 10 and over. In the subsequent two decades the share of secondary and return migration was rather negligible. The main value of these minimum estimates would be to indicate the relative extent of secondary and return migration among out-migrants in the intercensal periods. The higher amount of secondary and return migration during 1931-1941 could be explained by the economic depression when "there were more people to return as well as more motivation to return" (Eldridge, 1965<sup>b</sup>, p. 446). These limitations of the migration data caused by non-primary migration must be kept in mind in describing migration streams from the data given in Table 6.1.

### 6.3 STREAMS OF DECADE NET MIGRATION OF THE CANADIAN BORN BETWEEN PROVINCES

Because the stream analysis attempted here is based on the estimates of net balances of migratory exchanges between all pairs of provinces, the disturbing effects of secondary and return migration are likely to be of less importance. Thus, in order to identify the principal provinces of origin as well as destination of the Canadian-born migrants, the balances

**Table 6.2 – Intercensal Net Migration Gains or Losses Due to Exchanges  
Between Provinces of Canadian-born Population Aged 10 and Over,  
1931 - 1941, 1941 - 1951 and 1951 - 1961**

No.	Province of gain	Province of loss				
		Nfld.	P.E.I.	N.S.	N.B.	Que.
1931 - 1941						
		No.	No.	No.	No.	No.
1	British Columbia .....	...	206	886	771	1,692
2	Yukon and Northwest Territories..	...	9	15	8	—
3	Ontario .....	...	835	1,951	2,666	5,586
4	Quebec .....	...	810	1,519	5,644	—
5	Nova Scotia .....	...	1,003	—	1,181	—
6	New Brunswick .....	...	517	—	—	—
7	Manitoba .....	...	35	—	—	—
8	Alberta .....	...	—	—	—	—
9	Prince Edward Island .....	...	—	—	—	—
10	Saskatchewan .....	...	—	—	—	—
11	Totals .....	...	3,415	4,371	10,270	7,278
1941 - 1951						
		No.	No.	No.	No.	No.
12	British Columbia .....	...	858	3,728	2,664	4,934
13	Yukon and Northwest Territories..	...	20	202	100	203
14	Ontario .....	...	4,136	21,872	18,242	30,971
15	Alberta .....	...	312	1,249	767	1,600
16	Quebec .....	...	1,106	2,742	7,419	—
17	Manitoba .....	...	47	374	300	—
18	Nova Scotia .....	...	1,330	—	366	—
19	New Brunswick .....	...	931	—	—	—
20	Prince Edward Island .....	...	—	—	—	—
21	Saskatchewan .....	...	—	—	—	—
22	Totals .....	...	8,740	30,167	29,858	37,708
1951 - 1961						
		No.	No.	No.	No.	No.
23	British Columbia .....	536	719	3,445	1,470	2,775
24	Ontario .....	7,166	6,152	24,337	18,496	17,353
25	Alberta .....	363	839	2,024	1,337	1,378
26	Yukon and Northwest Territories..	60	65	163	119	69
27	Quebec .....	150	599	1,891	12,426	—
28	Manitoba .....	195	212	975	400	—
29	New Brunswick .....	240	897	3,715	—	—
30	Nova Scotia .....	1,239	766	—	—	—
31	Saskatchewan .....	—	153	—	—	—
32	Prince Edward Island .....	87	—	—	—	—
33	Newfoundland .....	—	—	—	—	—
34	Totals .....	10,036	10,402	36,550	34,248	21,575

SOURCE: Derived from Table 6.1.

**Table 6.2 – Intercensal Net Migration Gains or Losses Due to Exchanges  
Between Provinces of Canadian-born Population Aged 10 and Over,  
1931-1941, 1941-1951 and 1951-1961**

Province of loss							No.
Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.	Total	
1931-1941							
No.	No.	No.	No.	No.	No.	No.	
7,154	10,646	24,123	13,904	—	—	59,382	1
184	151	188	730	217	—	1,502	2
—	2,007	31,413	6,957	—	—	51,415	3
—	1,570	3,359	1,322	—	674	14,898	4
—	606	1,349	790	—	—	4,929	5
—	166	511	155	—	—	1,349	6
—	—	14,276	—	—	—	14,311	7
—	814	9,381	—	—	—	10,195	8
—	—	312	18	—	—	330	9
—	—	—	—	—	—	—	10
7,338	15,960	84,912	23,876	217	674	158,311	11
1941-1951							
No.	No.	No.	No.	No.	No.	No.	
16,093	29,419	56,694	28,822	—	14	143,226	12
789	459	863	433	—	—	3,069	13
—	19,890	28,029	579	—	—	123,719	14
—	5,570	25,619	—	—	—	35,117	15
—	1,310	2,704	—	—	—	15,281	16
—	—	11,379	—	—	—	12,100	17
—	—	795	—	—	—	2,491	18
—	—	250	—	—	—	1,181	19
—	—	256	—	—	—	256	20
—	—	—	—	—	—	—	21
16,882	56,648	126,589	29,834	—	14	336,440	22
1951-1961							
No.	No.	No.	No.	No.	No.	No.	
10,026	14,404	24,213	10,588	—	177	68,353	23
—	7,405	9,519	—	—	74	90,502	24
5,710	10,979	30,130	—	—	—	52,760	25
—	107	287	382	—	—	1,252	26
—	615	1,040	—	—	—	16,721	27
—	—	4,040	—	—	—	5,822	28
—	—	65	—	—	—	4,917	29
—	—	58	—	—	—	2,063	30
—	—	—	—	—	—	153	31
—	—	—	—	—	—	87	32
—	—	1	—	—	—	1	33
15,736	33,510	69,353	10,970	—	251	242,631	34

NET MIGRATION STREAMS BETWEEN PROVINCES,  
CANADIAN BORN 10 YEARS OLD AND OVER, CANADA 1931-1941 AND 1951-1961  
(IN THOUSANDS)

[illegible]

Note: Figures under L000 are not shown.

of migratory exchange between provinces were derived for the three decades from Table 6.1. The procedure was to subtract the smaller net change from the larger for each pair of provinces. The calculation yielded the amount of net migration gain and loss for each province resulting from migratory exchange with each of the other provinces. The results are presented in Table 6.2 and mapped in Chart 6.1.

**6.3.1 MIGRATION STREAMS, 1931-1941**—Tables 6.1 and 6.2 show that the main streams of migration in 1931-1941 were toward the three provinces of British Columbia, Ontario and Quebec. British Columbia gained from almost all the provinces and did not lose to any province except for a small number to the Yukon and Northwest Territories. Prince Edward Island, New Brunswick and the three Prairie Provinces were the main losing provinces, each having a net loss of migration to most provinces. Although Manitoba and Alberta had net losses to most provinces, both had substantial gains from Saskatchewan. Most of the return migration during the decade seems to have occurred for persons born in the central and eastern provinces who migrated to the Prairies during the early part of the present century. The migration from the Maritime Provinces, particularly from Nova Scotia and New Brunswick, was directed mainly to the central regions of Ontario and Quebec.

**6.3.2 MIGRATION STREAMS, 1941-1951 AND 1951-1961**—With few exceptions, interprovincial migration streams of the Canadian born for the 1940s and 1950s had more or less the same pattern as those of the 1930s. In both decades the predominant streams of migration were to British Columbia and Ontario, with smaller streams flowing into Quebec and Alberta. Compared with the preceding decade, Alberta had a higher migration gain than Quebec in the last two decades. Migration from the Maritime Provinces and Quebec was predominantly to Ontario, most of those who moved farther west going to British Columbia. Much of the out-migration from Ontario was toward British Columbia. Alberta became a predominantly gaining province in the 1940s and 1950s. Migrants from Manitoba and Saskatchewan formed three main streams, one eastward to Ontario and the other two westward to Alberta and British Columbia; the net out-migration from Manitoba and Saskatchewan in 1951-1961 was higher to Alberta than to Ontario. The net out-migration from Alberta was exclusively to British Columbia in both the decades.

## **6.4 MIGRATION STREAMS, 1956-1961**

Migration streams discussed above were based on intercensal net migration estimates. However, the 1961 migration data permit the study of streams on the basis of gross and net migration data for 1956-1961 as well as to study the nine interprovincial migration streams between rural

and urban areas, and streams of intraprovincial migration. Unlike the treatment of migration streams in the preceding sections, the data used for the study of streams in 1956-1961 include not only migration of the Canadian born, but also internal migration of foreign-born persons.

Appendix Table A.3 gives the gross migration to and from each province and the net migration between 1956 and 1961. The total inflow or outflow of interprovincial migrants during this period was 523,609. Many provinces experienced both high in-migration and high out-migration. Of these, only British Columbia, Ontario and Alberta had net in-migration, which indicated the predominant direction of migration during this period. "On the theory that streams of migration generate counter streams of disappointed migrants and that other things being equal, larger streams generate larger counter streams than do smaller streams" (Eldridge and Thomas, 1964, p. 127), the amount of high in-migration and out-migration observed for the provinces can be partially understood. Much of the counter streams are likely to be the effect of return migration of those who migrated to the provinces concerned before 1956. For example, between 1956 and 1961 Ontario had 150,000 in-migrants and 116,000 out-migrants, and Alberta had 79,000 in-migrants and 63,000 out-migrants. Of the out-migrants from Ontario, 41,000 or 35 per cent went to Quebec (Table 6.3). Much of this may be considered as return migration. British Columbia and Ontario were the major recipients of the out-migrants from Alberta, receiving about 65 per cent of the total out-migrants. A substantial proportion of Ontario's share of out-migrants from Alberta might have been return migrants.

The specific origins and destinations of interprovincial migrants between 1956 and 1961 are shown in Table 6.3. As in the earlier periods, the four Atlantic Provinces continued to be mainly out-migrating provinces. The chief destinations of migrants from Newfoundland were Nova Scotia and New Brunswick within the region, and Quebec and Ontario outside the region. Although a high proportion of the migration from Prince Edward Island was to Ontario (40 per cent), about 35 per cent of it moved to Nova Scotia and New Brunswick within the Atlantic region. In contrast, migration from Nova Scotia and New Brunswick was predominantly to areas outside the Atlantic region; Ontario and Quebec received 58 per cent of the out-migrants from Nova Scotia and 72 per cent of those from New Brunswick. The main movement within the Atlantic region was between Nova Scotia and New Brunswick. Very few persons moved to the Prairies and to British Columbia from the Atlantic Provinces.

From Quebec, migration was predominantly to the contiguous province of Ontario, which received 72 per cent of the total; a smaller stream led to New Brunswick, also a contiguous province, and another to British Columbia, a distant province.

Table 6.3 - Interprovincial Migrants Aged Five and Over, by Province of Residence in 1956 and 1961

Province of residence 1961	Province of residence 1956											
	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.	Total (In-migration)
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland .....	—	221	1,325	685	872	2,093	258	77	239	179	50	5,999
Prince Edward Island .....	53	—	1,592	813	469	1,273	168	137	165	145	62	4,877
Nova Scotia .....	1,934	1,031	—	4,038	3,249	10,118	1,262	447	806	2,010	160	25,055
New Brunswick .....	699	1,059	7,452	—	4,262	7,572	1,221	206	664	994	98	24,227
Quebec .....	1,454	485	4,442	8,808	—	40,629	3,416	925	2,928	3,009	413	66,509
Ontario .....	4,980	2,410	18,832	12,399	53,941	—	19,356	8,968	12,666	15,154	1,529	150,235
Manitoba .....	313	118	1,342	508	2,304	15,117	—	10,620	5,503	5,047	379	41,251
Saskatchewan .....	216	80	373	212	866	5,964	8,671	—	9,653	5,835	516	32,386
Alberta .....	457	317	1,581	950	3,418	14,494	10,091	26,039	—	20,344	1,807	79,498
British Columbia .....	511	203	3,241	944	4,500	17,542	12,336	17,974	28,225	—	1,882	87,358
Yukon and Northwest Territories .....	55	52	152	140	384	1,159	429	570	1,862	1,411	—	6,214
Totals (Out-migration) ..	10,672	5,976	40,332	29,497	74,265	115,961	57,208	65,963	62,711	54,128	6,896	523,609

SOURCE: 1961 Census unpublished basic migration tabulations, Table 6.

## INTERNAL MIGRATION IN CANADA

Thirty-five per cent of the out-migrants from Ontario went to Quebec, and over 30 per cent went to the Prairie Provinces. British Columbia and Nova Scotia, both distant from Ontario, together received about 24 per cent of the out-migrants from that province.

Migration from Manitoba was almost equally divided between the provinces in the east and west. The eastward flow was primarily to Ontario which received about 75 per cent of the total movement to the east. The westward flow was to Saskatchewan, Alberta and British Columbia, the latter two receiving larger numbers. The pattern of movement from Saskatchewan was similar to that from Manitoba, the westward movement being larger than the eastward movement. British Columbia received 27 per cent and Alberta received 39 per cent of the total out-migrants. Ontario and Manitoba together received 92 per cent of the total out-migrants to the east. On the whole, out-migration from Saskatchewan was predominantly to the contiguous provinces, 55 per cent going to Manitoba and Alberta. Most migrants from Alberta also went to adjacent provinces, 46 per cent to British Columbia and 15 per cent to Saskatchewan. Ontario, the second most attractive destination point for out-migrants from Alberta, received 20 per cent of the total.

CHART 62

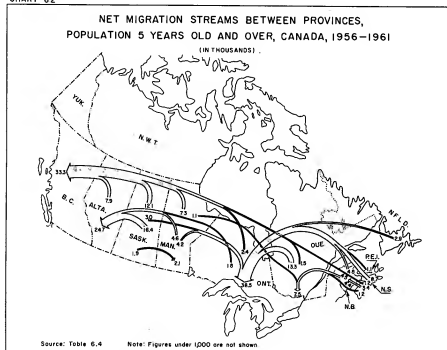


Table 6.4 - Net Exchanges of Migration Aged Five and Over Between Provinces, by Province of Gain and Province of Loss, 1956-1961

Province of gain	Province of loss											Total
	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.	
British Columbia .....	332	58	1,231	-	1,491	2,388	7,289	12,139	7,881	-	471	33,280
Ontario .....	2,887	1,137	8,714	4,827	13,312	-	4,239	3,004	-	-	370	38,490
Alberta .....	218	152	775	286	490	1,828	4,588	16,386	-	-	-	24,723
Quebec .....	582	16	1,193	4,546	-	-	1,112	59	-	-	29	7,537
New Brunswick .....	14	246	3,414	-	-	-	713	-	-	50	-	4,437
Yukon and Northwest Territories .....	5	-	-	42	-	-	50	54	55	-	-	206
Prince Edward Island .....	-	-	561	-	-	-	50	57	-	-	10	678
Manitoba .....	55	-	80	-	-	-	-	1,949	-	-	-	2,084
Nova Scotia .....	609	-	-	-	-	-	-	74	-	-	8	691
Saskatchewan .....	139	-	-	6	-	-	-	-	-	-	-	145
Newfoundland .....	-	168	-	-	-	-	-	-	-	-	-	168
Totals .....	4,841	1,777	15,968	9,707	15,293	4,216	18,041	33,722	7,936	50	888	112,439

SOURCE: Derived from Table 6.3.

Alberta and Ontario were the most preferred destination points for out-migrants from British Columbia, together receiving 66 per cent of the total. Smaller streams led to Saskatchewan and Manitoba.

Data showing the streams of interprovincial net exchanges of migration by gaining and losing provinces, derived from Table 6.3 are presented in Table 6.4 and Chart 6.2.

As noted earlier, the chief gaining provinces between 1956 and 1961 were British Columbia, Ontario and Alberta, which gained at the expense of the Prairie Provinces. British Columbia gained from most other provinces but the major part of its gain was contributed by the Prairie Provinces. Ontario gained mainly at the expense of the Atlantic Provinces and Quebec and Alberta mainly at the expense of Saskatchewan, which contributed about 66 per cent, Manitoba had the second highest loss in the exchange of migration between Alberta and other provinces. Quebec gained mostly from the Atlantic Provinces, particularly from New Brunswick which contributed about 60 per cent of Quebec's total gain.

## **6.5 MIGRATION STREAMS IN RELATION TO URBAN AND RURAL RESIDENCE<sup>1</sup>**

Each province of Canada contained different proportions of urban, rural non-farm and rural farm populations. Consequently, migrants who left one province for another had to change their residence from one urban or rural area to another. According to the 1961 migration data, nine rural-urban migration streams had to be considered:<sup>4</sup> (1) urban to urban; (2) urban to rural non-farm; (3) urban to rural farm; (4) rural non-farm to urban; (5) rural non-farm to rural non-farm; (6) rural non-farm to rural farm; (7) rural farm to urban; (8) rural farm to rural non-farm; and (9) rural farm to rural farm. The numbers and percentage distributions of interprovincial migration during 1956-1961, by type of residence in 1961, for each province are given in Table 6.5.

These data give only the destination of interprovincial migrants and not the origin of migrants. In a highly urbanized country like Canada, where over 70 per cent of the total population was urban in 1961 (1961 Census, Bulletin 7.1-2, Table 11), the dominant stream of migration is expected to be interurban. It can be seen from Table 6.5 that 78.4 per cent of the interprovincial migrants, aged five and over, went to urban areas and the remainder went to the rural areas. In the rural areas, the rural non-farm areas had the major share of interprovincial migrants (18.3 per cent). Concerning the migration by rural and urban areas for each province, there seems to be a high positive association between migration to urban areas and the urban population distribution for each province. The rank correla-

**Table 6.5 – Number and Percentage Distribution of Interprovincial Migrants Aged Five and Over for Each Province during 1956 - 1961, by Type of Residence in 1961**

Province or territory	To urban areas	To rural areas	To rural non-farm areas	To rural farm areas	Total migrants
Numbers					
Newfoundland .....	4,633	1,293	1,246	47	5,926
Prince Edward Island .....	2,172	2,712	2,043	669	4,884
Nova Scotia .....	15,583	9,361	9,028	333	24,944
New Brunswick .....	17,997	6,031	5,559	472	24,028
Quebec .....	57,538	8,446	7,394	1,052	65,984
Ontario .....	125,107	24,508	22,312	2,196	149,615
Manitoba .....	32,110	9,520	7,293	2,227	41,630
Saskatchewan .....	22,100	10,660	7,341	3,319	32,760
Alberta .....	64,659	15,422	11,080	4,342	80,081
British Columbia .....	64,889	22,257	19,678	2,579	87,146
Yukon and Northwest Territories .....	3,230	2,983	2,975	8	6,213
<b>Canada .....</b>	<b>410,018</b>	<b>113,193</b>	<b>95,949</b>	<b>17,244</b>	<b>523,211</b>
Percentages					
Newfoundland .....	78.2	21.8	21.0	0.8	100.0
Prince Edward Island .....	44.5	55.5	41.8	13.7	100.0
Nova Scotia .....	62.5	37.5	36.2	1.3	100.0
New Brunswick .....	74.9	25.1	23.1	2.0	100.0
Quebec .....	87.2	12.8	11.2	1.6	100.0
Ontario .....	83.6	16.4	14.9	1.5	100.0
Manitoba .....	77.1	22.9	17.5	5.4	100.0
Saskatchewan .....	67.5	32.5	22.4	10.1	100.0
Alberta .....	80.7	19.3	13.9	5.4	100.0
British Columbia .....	74.5	25.5	22.6	2.9	100.0
Yukon and Northwest Territories .....	52.0	48.0	47.9	0.1	100.0
<b>Canada .....</b>	<b>78.4</b>	<b>21.6</b>	<b>18.3</b>	<b>3.3</b>	<b>100.0</b>

SOURCE: 1961 Census unpublished basic migration tabulations, Table 4.

tion calculated between percentage of migration to urban areas in 1956-1961 and percentage of urban population in 1961 for each province gave a correlation coefficient of 0.75. This may be expected because, normally, migrants would be exposed to the possibility of settling in a particular type of community in proportion to the size of that community in the total population (Bogue, Shryock, and Hoermann, 1957, C. VI).

Using the detailed classification of migration data by origin and destination, the nine streams of interprovincial migration among urban and rural areas for Canada were derived and are presented in Table 6.6.

**Table 6.6 – Streams of Interprovincial Migration Among Urban and Rural Areas of Persons Aged Five and Over, 1956-1961**

Origin and destination of urban-rural migration	Number	Per cent	Migration rate (per 100 pop. in 1961)	Stream velocity <sup>a</sup>
Total interprovincial migration ....	523,117	100.0	3.42	3.42
In-migration to urban .....	410,004	78.4	3.84	3.84
In-migration to rural non-farm ...	95,957	18.3	3.40	3.40
In-migration to rural farm .....	17,156	3.3	0.95	0.95
Out-migration from urban .....	419,265	80.1	3.93	3.93
To urban .....	341,992	65.4	3.20	4.59
To rural non-farm .....	66,662	12.7	0.62	0.89
To rural farm .....	10,611	2.0	0.10	0.14
Out-migration from rural non-farm ..	30,053	5.7	1.07	1.07
To urban .....	18,894	3.6	0.67	3.64
To rural non-farm .....	6,909	1.3	0.25	1.36
To rural farm .....	4,250	0.8	0.15	0.81
Out-migration from rural farm .....	73,799	14.1	4.07	4.07
To urban .....	49,118	9.4	2.71	22.89
To rural non-farm .....	22,386	4.3	1.24	10.47
To rural farm .....	2,295	0.4	0.13	1.10
Net migration .....	—	—	—	—
Urban .....	- 9,261	- 1.8	- 0.09	0.09
Rural non-farm .....	65,904	12.6	2.34	2.34
Rural farm .....	- 56,643	- 10.8	- 3.13	3.13

<sup>a</sup> For the explanation of stream velocity, see the text. Those who changed residence but did not state their type of residence in 1956 were distributed prorata on the basis of those who stated the type of residence in 1956.

SOURCE: 1961 Census, Bul. 4.1-9, Tables 11 and 13.

**6.5.1 VOLUME OF MIGRATION STREAMS**—A number of findings regarding the volume, rates and velocities of rural-urban migration streams can be derived from the data in Table 6.6 (velocity is defined in Section 6.5.3). The number and percentage of migration given in columns 1 and 2 show the extent of each migration stream.

One notable finding is that, unlike the traditional type of movement in the agrarian societies where migration is predominantly from rural to urban areas,<sup>5</sup> the dominant stream of migration in Canada was between urban areas in 1956-1961. The United States data also show that urban-to-urban migration was the predominant type of migration in recent decades (Taeuber and Taeuber, 1964, pp. 718-729; Bogue, Shryock, and Hoermann, C. VI). Of the nine streams of migration, that between urban areas constituted over 65 per cent of the total movement. In view of the fact that urban population constituted nearly 70 per cent of the total population of Canada in 1961, it is not surprising to find that interurban or intercity migration contributed such a large part of the total interprovincial migration. The second dominant stream of migration was to the rural non-farm areas; about 13 per cent of migrants from urban areas, and four per cent from rural farm areas moved to rural non-farm areas.

Significantly, the majority of migrants moved between communities of the same type. This type of "circulation migration" (Bogue, Shryock, and Hoermann, 1957, p. 47) was observed for migrants from both urban and rural non-farm areas. About 82 per cent of the migrants from urban areas and 23 per cent of those from rural non-farm areas moved to the same type of community. This tendency was not observed for migrants from rural farm areas; only 3.1 per cent of whom went to the same type of area, the remainder going to urban and rural non-farm areas. The excess of the proportion of migrants between the same type of community of origin and destination over the proportion of the population of that community to the general population may be taken as an index of "circulation migration". For 1956-1961, the indexes (percentages) were +11.9 for urban, +4.6 for rural non-farm and -8.7 for rural farm. From the pattern of migration streams observed here, the temptation is to reach a hasty conclusion that migration achieved hardly anything either for the migrants or for the communities of origin and destination. This is not true because the present analysis is for interprovincial migration where change of residence involves change of region or province with different economic, climatic and other aspects of life.

The migration data also show a small net loss for the urban population, a relatively large net loss for the rural farm population and a relatively large net gain for the rural non-farm population. The small net loss for the urban areas indicates the emergence of centrifugal movement from

the central city to suburbs. This has been one of the significant features of migration pattern in Canada during 1956-1961. Such a pattern is not surprising because, at a relatively mature stage of urbanization, it should be expected that the predominant stream of migration becomes interurban with a possible net loss through migration to urban centres as a whole. Some urban centres may continue to gain substantially through a net in-migration consisting of both urban and rural migrants.

**6.5.2 RATES OF RURAL AND URBAN MIGRATION**—Table 6.6 gives three in-migration rates and 12 out-migration rates which include "circulatory migration". The out-migration rates indicate that rural population, particularly rural farm population, was more mobile than urban population. This may be expected because once people migrate to the urban area, the propensity to move to a non-urban area is likely to be less, and the main movement for the urban dwellers would be between urban areas. Of the three types, migration to rural farm areas was the least during 1956-1961 which, combined with the high out-migration from such areas, resulted in a three per cent net out-migration rate for rural farm population.

**6.5.3 VELOCITY OF MIGRATION**—The last column of Table 6.6 gives the velocity of migration for the nine streams of migration between rural and urban areas. Velocity is defined as the rate at which a stream of migrants flows from a particular place of origin to a particular place of destination during a migration interval. This measure eliminates the effect of population size of both the sending and receiving areas.<sup>6</sup>

Thus:

$$V_{ij} = \left( \frac{M_{ij}}{P_i} \div \frac{P_j}{P_t} \right) \quad 100 \quad \text{or} \quad \left( \frac{M_{ji}}{P_j} \div \frac{P_i}{P_t} \right) \quad 100$$

$$= \left( \frac{M_{ij}}{P_i P_j} P_t \right) \quad 100 \quad \text{or} \quad \left( \frac{M_{ji}}{P_i P_j} P_t \right) \quad 100$$

Where,

$V_{ij}$  = the velocity of migration stream from area  $i$  to area  $j$

$M_{ij}$  = the number of migrants in the stream from area  $i$  to area  $j$

$P_i$  = the population in area  $i$

$P_j$  = the population in area  $j$

$P_t$  = the total population of all potential areas of destination, including the area of origin.

The net migration rates disregarding the sign are also velocities.<sup>7</sup> The three highest velocities of migration streams, in order of rank are those of rural farm to urban, rural farm to rural non-farm, and urban to urban. Velocity of migration from rural non-farm to urban was also fairly high but

the velocities were lowest for all the three streams to rural farm areas. These velocity patterns show that, although the volume of migration from rural farm areas was small, it continued to be a source of urban growth in Canada during 1956-1961. The relatively high velocity of migration between rural farm and rural non-farm areas and between rural non-farm and urban areas may be taken as evidence of the tendency among many people to move to the rural-urban fringe areas where construction of own buildings is not hampered by zoning restrictions. The narrowing of the difference between the nature of urban and rural non-farm residences with the introduction of highways and other technological developments has made such movements attractive. This tendency was noticed in the United States as well (Shryock, 1964, C. 10).

**6.5.4 URBAN-RURAL MIGRATION STREAMS, BY SEX AND AGE** — Although a detailed analysis of the sex and age patterns of migration is given in Chapter Seven, this section contains a brief discussion of the age and sex patterns of various rural-urban migration streams. Because net migration is an abstraction and its sex composition has little analytical meaning, the discussion is confined to in- and out-migration streams using sex ratios (males per 100 females) of migrants.<sup>6</sup>

Table 6.7 shows that males outnumbered females among the total interprovincial migrants between 1956 and 1961 but that the sex ratio was almost even among migrants to urban areas, which constituted the predominant migration stream. The sex disparity was higher among total in-migrants to rural farm areas, where the ratio was 126 males for 100 females. Among the out-migration streams, females tended to move from the urban areas in larger numbers than did males. Most of the female migration was interurban which resulted in sex ratios below 100 for interurban migration streams. Males were preponderant in all the migration streams to rural farm areas. Of these, the highest sex disparity was in migration from rural non-farm to rural farm areas.

The sex ratios of migrants by age showed varying patterns. One notable feature was that, except in the migration streams to rural farm areas, females outnumbered males in most migration streams in the age groups 15-19 and 20-24, indicating the predominance of young female migrants to urban and rural non-farm areas. In the age group 65 and over, females also outnumbered males in the total in-migration to urban and rural farm areas and in the out-migration streams from urban to urban and to rural farm areas. In most of the other age groups there was an excess of male migrants over female migrants.

Table 6.7 - Sex Ratios of Urban-Rural Migration Streams by Age Group, 1956-1961

(Males per 100 females)

Migration stream	5 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 44	45 - 64	65 +	Total
Total interprovincial migration .....	103.8	88.3	82.6	104.4	112.3	112.3	107.1	86.6	101.9
In-migration to urban .....	102.7	84.7	83.1	105.5	109.7	110.0	102.2	81.3	100.1
In-migration to rural non-farm ....	104.4	93.1	74.9	99.3	120.0	119.8	125.4	111.5	106.1
In-migration to rural farm .....	128.4	158.6	107.0	105.3	134.8	132.2	147.1	80.0	125.8
Out-migration from urban .....	101.8	88.4	78.0	100.3	112.0	111.7	104.7	79.2	99.8
To urban .....	101.3	86.0	78.4	100.9	108.8	109.4	102.1	74.8	98.4
To rural non-farm .....	102.0	91.9	71.9	96.4	123.1	120.5	115.3	104.1	103.9
To rural farm .....	121.1	146.3	98.3	104.9	159.5	141.4	135.9	74.2	122.6
Out-migration from rural non-farm ...	116.8	98.6	95.3	126.0	116.6	103.8	113.5	131.6	109.3
To urban .....	109.2	84.6	96.9	136.2	117.1	96.6	97.6	125.0	103.2
To rural non-farm .....	107.9	115.2	74.6	112.2	111.6	108.1	128.4	153.8	108.0
To rural farm .....	158.7	190.4	139.7	106.8	123.5	122.9	165.8	107.8	144.2
Out-migration from rural farm .....	109.7	82.1	101.2	130.3	112.6	118.8	120.1	117.5	111.2
To urban .....	109.9	78.1	104.4	141.9	115.5	118.4	105.1	116.4	110.8
To rural non-farm .....	109.9	88.1	87.6	108.4	111.7	120.4	156.4	119.7	112.1
To rural farm .....	104.6	147.1	105.7	105.2	78.0	108.4	174.4	123.5	110.4

SOURCE: 1961 Census, Bul. 4.1-9, Table 13.

Table 6.8 - Rates of Urban-Rural Migration Streams by Age Group, 1956-1961

(Per 100 population of each group; the total sample population in 1961 of each group was the denominator used for calculating the rates.)

Migration stream	5-14	15-19	20-24	25-29	30-34	35-44	45-64	65+	Total
Total interprovincial migration .....	3.4	2.6	5.7	6.4	5.1	3.7	1.8	1.4	3.4
In-migration to urban .....	3.9	3.2	6.5	6.7	5.3	4.0	2.0	1.6	3.8
In-migration to rural non-farm ....	3.6	2.1	4.5	6.4	5.8	4.2	1.7	1.3	3.4
In-migration to rural farm .....	0.8	0.7	1.9	2.5	1.7	0.9	0.6	0.5	0.9
Out-migration from urban .....	4.2	2.9	5.9	7.1	5.7	4.2	2.1	1.7	3.9
To urban .....	3.3	2.4	5.0	5.8	4.6	3.4	1.7	1.3	3.2
To rural non-farm .....	0.8	0.4	0.7	1.1	0.9	0.6	0.3	0.3	0.6
To rural farm .....	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Out-migration from rural non-farm ...	0.8	1.4	3.4	1.6	1.0	0.9	0.7	0.5	1.1
To urban .....	0.4	1.0	2.6	1.0	0.6	0.5	0.4	0.3	0.7
To rural non-farm .....	0.2	0.2	0.5	0.4	0.3	0.2	0.2	0.2	0.2
To rural farm .....	0.1	0.2	0.2	0.2	0.2	0.2	0.1	-	0.1
Out-migration from rural farm .....	4.1	2.7	8.2	9.4	7.6	4.8	1.8	1.8	4.1
To urban .....	2.5	2.0	6.4	6.5	4.8	3.1	1.2	1.2	2.7
To rural non-farm .....	1.5	0.7	1.5	2.6	2.4	1.6	0.5	0.4	1.2
To rural farm .....	0.1	0.1	0.3	0.3	0.3	0.1	0.1	0.1	0.1
Net migration .....	-	-	-	-	-	-	-	-	-
Urban .....	- 0.23	0.29	0.58	- 0.39	- 0.38	- 0.18	- 0.01	- 0.06	- 0.09
Rural non-farm .....	2.84	0.65	1.14	4.80	4.73	3.33	1.00	0.78	2.34
Rural farm .....	- 3.29	- 2.01	- 6.32	- 6.83	- 5.88	- 3.84	- 1.22	- 1.21	- 3.12

SOURCE: Same as Table 6.7.

The rates of all migration streams were markedly higher in the age groups 20-34 than in other age groups (Table 6.8). The high mobility among the young adult population is a fundamental aspect of population dynamics that has been documented in several migration studies. Of the nine migration streams, the age-specific migration rates were highest for migrants to urban areas whether they came from other urban areas or from rural areas; the rates were lowest for movements to rural farm areas. Generally speaking, children aged 5-14 had higher migration rates than persons aged 15-19. The movement of children is generally associated with family migration and the relatively high rates of migration in the 5-14 age group may be attributed to the effect of increased family migration between 1956 and 1961 or to some bias in the estimation of migration for this age group (see Chapter Two for details).

Although urban areas had a net loss of migration in all the age groups combined, they gained in the age groups 15-19 and 20-24. In the rural areas, the rural farm population had a net loss and the rural non-farm population had a net gain in all age groups.

**6.5.5 MIGRATION STREAMS, BY URBAN SIZE CLASS**—The analysis of interprovincial migration streams between the three types of residence—urban, rural non-farm and rural farm—in the previous sections shows that the predominant migration stream was between urban areas in the period 1956-1961. Using the 1961 migration data by urban size classes for different types of migration, it is possible to examine the important variations of migration flows within the urban population. On the basis of the 1961 data, a brief analysis of the amount and direction of the interprovincial and intraprovincial migration flows by rural and urban areas, and urban size groups for males and females is given in this section. The relevant data are expressed in the form of percentages and are presented in Table 6.9.

Altogether, there are 56 migration streams for each sex for total, interprovincial and intraprovincial migration (Table 6.9); total migration is the sum of interprovincial and intraprovincial migration. The stream pattern of total migration was similar to the pattern observed earlier for interprovincial migration, i.e., about 72 per cent of the migrants moved to urban areas, 23 per cent moved to rural non-farm areas and the remainder moved to rural farm areas. Also, the predominant movement was between urban areas. Of the total interurban migration, places with 100,000 population or over received the highest share (over 50 per cent) followed by places with less than 10,000 population. Places with population between 10,000 and 30,000 received the lowest proportion of total interurban migration. This was true for migration between all urban size groups except the group with population between 30,000 and 100,000 where the second highest amount of migration was between the same size groups. When the origin of migration

*MIGRATION STREAMS IN RELATION TO URBAN AND RURAL RESIDENCE*

**Table 6.9 – Streams of Migration by Urban Size Group, Rural Non-farm and Rural Farm for Interprovincial and Intraprovincial Migration, by Sex, 1956- 1961**

Type of migration and classification	Urban size group				Total urban	Rural non-farm	Rural farm	Total
	Under 10,000	10,000 to 29,999	30,000 to 99,999	100,000 or over				
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
<b>Total migration</b>								
<b>Males –</b>								
Total urban .....	67.3	69.9	74.2	81.3	76.2	52.3	56.5	71.0
100,000 or over .....	31.6	35.0	37.5	64.2	50.9	20.3	23.6	43.7
30,000- 99,999 .....	9.0	9.5	20.1	5.4	8.2	7.1	7.9	8.1
10,000- 29,999 .....	8.4	10.8	5.4	3.8	5.8	6.5	7.0	6.1
Under 10,000 .....	18.3	14.6	11.2	7.9	11.3	18.4	18.0	13.1
Rural non-farm .....	26.3	25.0	21.5	15.8	19.7	27.0	38.6	23.2
Rural farm .....	6.4	5.1	4.3	2.9	4.1	20.7	4.9	5.8
<b>Totals, males .....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Females –</b>								
Total urban .....	69.2	71.5	75.3	81.8	77.2	55.9	57.8	72.4
100,000 or over .....	32.6	36.6	38.7	64.9	51.8	21.5	24.4	44.6
30,000- 99,999 .....	9.6	9.4	20.2	5.1	8.2	8.1	8.0	8.2
10,000- 29,999 .....	8.8	10.9	5.6	3.8	5.9	6.9	7.0	6.3
Under 10,000 .....	18.2	14.6	10.8	8.0	11.3	19.4	18.4	13.3
Rural non-farm .....	25.0	23.9	20.7	15.5	19.1	26.1	37.2	22.4
Rural farm .....	5.8	4.6	4.0	2.7	3.7	18.0	5.0	5.2
<b>Totals, females .....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Interprovincial migration</b>								
<b>Males –</b>								
Total urban .....	73.9	79.1	84.0	83.8	81.0	59.4	65.0	77.7
100,000 or over .....	40.4	47.5	61.7	61.3	55.0	33.6	35.4	51.1
30,000- 99,999 .....	7.6	9.7	6.1	8.7	8.3	4.8	6.8	7.9
10,000- 29,999 .....	8.7	8.7	6.8	5.6	6.8	7.2	8.3	7.1
Under 10,000 .....	17.2	13.2	9.4	8.2	10.9	13.8	14.5	11.6
Rural non-farm .....	21.4	17.7	14.3	14.1	16.2	24.1	31.9	18.7
Rural farm .....	4.7	3.2	1.7	2.1	2.8	16.5	3.1	3.6
<b>Totals, males .....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 6.9 – Streams of Migration by Urban Size Group, Rural Non-farm and Rural Farm for Interprovincial and Intraprovincial Migration, by Sex, 1956-1961 – concluded**

Type of migration and classification	Urban size group				Total urban	Rural non-farm	Rural farm	Total
	Under 10,000	10,000 to 29,999	30,000 to 99,999	100,000 or over				
<b>Interprovincial migration – concluded</b>	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
<b>Females –</b>								
Total urban .....	74.9	81.0	85.7	84.5	82.2	62.7	64.8	79.1
100,000 or over .....	41.5	49.7	64.4	62.4	56.6	35.1	35.8	52.8
30,000-99,999 .....	7.5	9.6	5.6	8.1	7.9	6.0	6.5	7.7
10,000-29,999 .....	9.0	8.7	6.4	5.6	6.8	7.2	8.0	7.0
Under 10,000 .....	16.9	13.0	9.3	8.4	10.9	14.4	14.5	11.6
Rural non-farm .....	21.1	16.5	13.1	13.7	15.6	24.7	32.0	18.0
Rural farm .....	4.0	2.5	1.2	1.8	2.2	12.6	3.2	2.9
<b>Totals, females .....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Intraprovincial migration</b>								
<b>Males –</b>								
Total urban .....	65.4	66.9	71.1	80.5	74.8	51.3	54.5	69.3
100,000 or over .....	29.0	30.9	29.7	64.8	49.7	18.3	20.8	41.7
30,000-99,999 .....	9.4	9.4	24.6	4.5	8.2	7.5	8.2	8.2
10,000-29,999 .....	8.3	11.6	5.0	3.4	5.5	6.5	6.7	5.9
Under 10,000 .....	18.7	15.0	11.8	7.8	11.4	19.0	18.8	13.5
Rural non-farm .....	27.7	27.4	23.8	16.3	20.7	27.4	40.2	24.4
Rural farm .....	6.9	5.7	5.1	3.2	4.5	21.3	5.3	6.3
<b>Totals, males .....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Females –</b>								
Total urban .....	67.7	68.5	71.9	81.1	75.8	55.2	56.4	70.7
100,000 or over .....	30.4	32.4	30.5	65.5	50.5	19.9	22.1	42.5
30,000-99,999 .....	10.1	9.4	24.8	4.3	8.3	8.3	8.3	8.4
10,000-29,999 .....	8.7	11.6	5.3	3.4	5.6	6.9	6.8	6.1
Under 10,000 .....	18.5	15.1	11.3	7.9	11.4	20.1	19.2	13.7
Rural non-farm .....	26.0	26.2	23.2	16.0	20.1	26.2	38.3	23.4
Rural farm .....	6.3	5.3	4.9	2.9	4.1	18.6	5.3	5.9
<b>Totals, females .....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

SOURCE: 1961 Census unpublished basic migration tabulations, Tables 3 and 4.

is considered by urban size class, a positive association between the amount of migration to urban areas and the urban size class, and a negative association between the amount of migration to both rural non-farm and rural farm areas and the urban size class can be observed. Further, although the urban places with 100,000 population or over received the highest amount of interurban migration, their share decreased with the decrease in the size of the places of origin. There was very little difference in the basic patterns of total migration streams for males and females. However, regardless of the origin considered, more females than males migrated to urban areas.

There was some variation in the amounts and patterns of migration streams for interprovincial and intraprovincial migration. First, interprovincial migration constituted a higher percentage of migration to urban areas than intraprovincial migration; 78 per cent of the total interprovincial migration flowed to urban areas while the corresponding flow of intraprovincial migration was only 70 per cent. Secondly, a higher percentage of intraprovincial migration than interprovincial migration moved to rural non-farm and rural farm areas. Thirdly, unlike the stream pattern of total migration, no consistent relationship between the amount of migration and urban size groups could be noticed for either interprovincial or intraprovincial migration. One notable difference was that, although 62 per cent of interprovincial migration from urban places with populations between 30,000 and 100,000 flowed to urban places with populations of 100,000 or over, the corresponding percentage of intraprovincial migration was only 30. Thus, interprovincial migration was more to larger urban places than intraprovincial migration.

## 6.6 SUMMARY

Two types of data were used for the stream analysis—(1) estimates of decade interprovincial migration for the Canadian born and (2) migration data for 1956-1961. The decade estimates showed that the origin and destination of Canadian-born migrants remained essentially the same since 1931. The chief gaining provinces in the decades 1931-1961 were Ontario, Quebec, British Columbia and Alberta, and the chief losing provinces were Prince Edward Island, New Brunswick, Manitoba and Saskatchewan. The pattern of migration streams observed for 1956-1961 was more or less similar to the pattern for 1951-1961. Thus, on the whole, migration was mainly from the less urbanized to the more urbanized and industrialized provinces. The consistency of the pattern of interprovincial migration suggests the persistence of the push and pull factors of migration operating in the Canadian provinces.

The dominant stream of migration in Canada was interurban between 1956 and 1961, followed by the stream to rural non-farm areas. Further, an examination of the origin and destination of the streams showed that most migrants moved between communities of the same type. Also, the migration data showed a small net loss for the urban population, a relatively large net loss for the rural farm population, and a relatively large net gain for the rural non-farm population. The small net loss of migration for the urban areas indicates the emergence of centrifugal movement from the central city to suburbs. The rates and velocities of the nine rural-urban migration streams showed that rural farm population was more mobile than urban population, and that, despite the small volume of migration from rural farm areas, this continued to be a source of urban growth in Canada during 1956-1961.

Although males outnumbered females among the total interprovincial migrants between 1956 and 1961, the sex ratio was almost even among migrants to urban areas, which constituted the predominant migration stream. Most of the female migration was interurban. Males were preponderant in all the migration streams to rural farm areas. The sex ratios of migrants showed varying patterns. One notable feature was the predominance of young female migration to urban and rural non-farm areas. The rates of migration by age were highest for migrants to urban areas whether they came from other urban areas or from rural areas.

The analysis of migration streams by urban size class showed that places with 100,000 population or over received the highest number (over 50 per cent) of interurban migrants. However, the share of the places with 100,000 population or over decreased inversely with the size of places of origin. Of the two types of migration examined—interprovincial and intra-provincial migration—the former was more to large urban places than the latter. Also, interprovincial migration constituted a higher percentage of migration to urban areas than intraprovincial migration.

#### FOOTNOTES TO CHAPTER SIX

<sup>1</sup> Ravenstein (1885, p. 199) used the terms "current" and "counter-current" for stream and counter stream in modern terminology (also Reprint No. 5. 482 in the *Bobbs-Merrill Series in the Social Sciences*).

<sup>2</sup> Primary migrants defined here are those who moved from the province of birth to another province. Secondary migrants are those who moved from a province that was not their province of birth to another province. Return migrants are those who moved to their province of birth from some other province where they were residing at the beginning of the migration interval. (For definitions and other details pertaining to primary and secondary migration, see Eldridge, 1963, pp. 328-330; Eldridge, 1965<sup>b</sup>, pp. 444-455.)

<sup>3</sup> In the 1961 Census all cities, towns and villages of 1,000 or more persons, whether incorporated or not, as well as urbanized fringes of metropolitan areas, other major urban areas and certain smaller cities where the city and its urbanized fringe had 10,000 or more population, were classified as urban. The remainder of the population was classified as rural. The rural farm population comprised of all persons living in dwellings situated on farms in rural localities. A farm for the 1961 Census was defined as a holding of one or more acres with annual sale of agricultural products of \$50 or more. (For explanations of the 1961 Census urban definition, see Stone, 1967, p. 222.)

<sup>4</sup> Similar type of analysis was carried out by Bogue, Shryock and Hoermann (1957, C. VI) in their study for the United States for the period 1935-1940.

<sup>5</sup> According to Ravenstein (1885, p. 199), "The natives of towns are less migratory than those of the rural parts of the country". There are numerous empirical studies to substantiate the predominance of rural-urban migration in agrarian societies where most of the people live in rural areas.

<sup>6</sup> The term "velocity of migration stream" is defined and used first in the study by Bogue, Shryock, and Hoermann (1957, C. IV). (See also Bogue, 1959, pp. 503 and 504.)

<sup>7</sup> "Velocity is given no sign because its value is not dependent upon the direction of flow between two areas, and is reported without reference to either origin or destination." (Bogue, Shryock, and Hoermann, 1957, p. 49.)

<sup>8</sup> The sex ratio of net migration may not indicate the sex ratio of gross in-migration and gross out-migration. It is possible to have situations where males outnumber females in both in- and out-migration, or vice versa with net migration showing an opposite sex composition.



## *Chapter Seven*

# ***MIGRATION DIFFERENTIALS BY SEX, AGE AND MARITAL STATUS\****

An important aspect of the analysis of internal migration is the differentials that are associated with the demographic characteristics of migrants. Various studies have shown that migration is selective, which implies that migrants are not a random sample of the population at the place of origin. According to Everett Lee (1966, p. 56), the selectivity of migration may be attributed to the fact that persons respond differently to the sets of plus and minus factors at origin and destination and have different abilities to overcome the intervening sets of obstacles. As a consequence of the prevalence of selectivity, migration generally changes the composition of the demographic, social and economic characteristics of the population in both the area of origin and the area of destination. The sex, age and marital status of the migrants are considered in this chapter; a brief analysis of the age-sex differentials of rural-urban migration between 1956 and 1961 is given in Chapter Six.

The intercensal net migration estimates of the Canadian born obtained from place-of-birth and place-of-residence data included in Chapter Three and the migration data collected in the 1961 and 1941 Censuses have been used to study the age-sex differentials for different types of migrants. Because of differences in the characteristics of internal and external migrants, a comparison of the sex and age characteristics of Canadian-born and foreign-born migrants is also made.

### **7.1 SEX DIFFERENTIALS**

Sex selectivity in internal migration probably depends on the type of migration, the prevailing local conditions, the types of communities of origin and destination and the circumstances under which people migrate. Hence, it is hard to find a universal pattern of sex composition of the

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\* Harry Freedman, formerly a member of the Demographic Analysis and Research Section, did some preliminary work on this chapter and some of the tables and charts which he prepared have been used herein.

migrants. In view of the different types of migration involved in the present study, it is rather difficult to find any general pattern of sex selectivity. In this section, the sex differentials of migrants of all ages are considered; the sex differentials by age are examined in Section 7.2. For reasons stated in the previous chapter, little attention has been given to the sex differences of net migration, which is an abstraction.

The place-of-birth data available in past censuses provide a historical perspective of trend in the sex differences of lifetime migration. Table 7.1 gives the percentage distributions of non-migrants (population excluding interprovincial migrants) and interprovincial migrants among the Canadian born, and migrants from other countries, by sex, for Canada from 1911 to 1961.

**Table 7.1 – Percentage of Population Enumerated by Place of Birth, by Sex, 1911-1961**

NOTE. – Unlike in Chapters Four and Five, data for 1901 are not included here because place-of-birth data by sex are not available for that year.

Census year	Enumerated population of Canada		Born and enumerated in the same province		Born in other provinces		Born in other countries	
	Male	Female	Male	Female	Male	Female	Male	Female
1911 .....	100.0	100.0	66.1	74.8	8.5	7.1	25.4	18.2
1921 .....	100.0	100.0	67.7	71.9	8.3	7.7	24.0	20.4
1931 .....	100.0	100.0	68.0	72.4	7.8	7.4	24.2	20.2
1941 .....	100.0	100.0	73.2	75.8	8.1	7.9	18.7	16.3
1951 .....	100.0	100.0	74.5	75.9	10.1	10.0	15.4	14.1
1961 .....	100.0	100.0	73.7	74.4	10.3	10.4	16.0	15.2

SOURCES: 1911 Census, Vol. II, Table 17; 1921 Census, Vol. II, Table 52; 1931 Census, Vol. I, Table 23; 1941 Census, Vol. III, Table 19; 1951 Census, Vol. II, Table 11; and 1961 Census, Vol. I.2, Table 49.

The data show that while there was a higher percentage of females than males among non-migrants, the percentages of females among interprovincial migrants and migrants from abroad were consistently lower than those of males in all the years except 1961, when the percentage of females among interprovincial migrants slightly exceeded that for males. The observed sex differential was greater in the earlier years than in the later years for all three groups. The tendency for the sex differentials to narrow among migrants over time indicates the possibility of increased labour force participation of females in recent years.<sup>1</sup> However, considering the fact that the labour force participation rates are generally higher for males

than for females and other plausible factors associated with higher male migration, the sex differentials should have been greater than observed here. The inclusion in the data of children and parents, among whom the propensity to migrate should normally be the same, might have been a major factor for the lower sex differentials among migrants as shown in Table 7.1.

The 1961 migration data for 1956-1961 for the population aged five and over also showed the tendency for sex differentials to disappear among total migrants. In 1961 the sex ratios (males per 100 females) of the total sample population, non-movers, and total movers within Canada were 101, 102 and 100, respectively. The 1941 data on interprovincial migrants showed a sex ratio of 101 for the total interprovincial migrants.

An examination of the effect of distance on sex selection can be made from the migration statistics collected in 1961 for 1956-1961. The relevant data expressed in the form of migration rates by sex and the sex ratios derived are given in Table 7.2.

**Table 7.2 - Rates of Migration by Sex, and Ratios of Male to Female Migration Rates, by Type of Migration, 1956-1961**

Type of migration	Rate per 100 sample population		$\frac{\text{Male rate}}{\text{Female rate}} \times 100$	Males per 100 females
	Male	Female		
Total movers within Canada ..	42.1	42.7	96.3	99.6
Movers within the same municipality .....	25.1	25.4	98.8	100.1
Movers within the same province .....	13.3	13.7	97.1	98.1
Movers between contiguous provinces .....	1.8	1.8	100.0	101.6
Movers between non-contiguous provinces .....	1.7	1.6	100.0	102.7
Movers who did not state their place of birth in 1956 .....	0.2	0.2	100.0	100.0
Migrants from abroad .....	3.1	3.1	100.0	99.9
Total sample population ...	...	...	...	101.0

SOURCE: 1961 Census, Bul. 4.1-9, Table I 1.

The sex ratio of gross migrants and migration rates for 1956-1961 show a slightly different picture of sex differentials for various types of migration (Table 7.2). According to the sex ratios of gross migration, there is some relationship between migration and distance. In internal

# INTERNAL MIGRATION IN CANADA

movements, the sex ratios varied more or less directly with distance spanned. The sex ratios were highest among interprovincial migrants, and the excess of males was greater between non-contiguous provinces than between contiguous provinces. The migration rates by sex and the percentage ratios of male to female rates did not show such a pattern. The migration rates were calculated for the sample male or female population aged five and over. The rates show that, except for migration between non-contiguous provinces, female rates were either higher or equal to male rates for all types of migration between 1956 and 1961. The excess of males over females in the total sample population aged five and over was responsible for the observed differences in the rates of male and female migrants and the sex ratios of migrants.

**Table 7.3 – Sex Ratios of Migrants by Type of Migration and by Province, 1956- 1961**

(Males per 100 females)

Province or territory	Total sample population	Total movers within Canada	Intra-municipal movers	Intra-provincial movers	Movers between contiguous provinces	Movers between non-contiguous provinces
Newfoundland .....	105.1	97.8	100.8	89.2	119.1	100.5
Prince Edward Island .....	104.6	97.2	100.9	85.8	114.0	99.2
Nova Scotia .....	101.3	97.1	98.0	91.8	99.9	110.8
New Brunswick .....	101.1	96.1	98.4	89.2	97.6	109.0
Quebec .....	99.8	97.9	98.7	95.9	101.7	104.4
Ontario .....	99.8	100.2	100.5	99.7	98.8	102.0
Manitoba .....	101.8	99.0	97.9	98.6	105.7	101.6
Saskatchewan .....	107.1	102.0	117.4	96.8	103.2	110.2
Alberta .....	106.1	103.6	104.7	101.8	104.4	100.2
British Columbia .....	100.4	100.2	99.7	101.7	97.8	99.8
Yukon and Northwest Territories .....	111.9	111.4	110.4	117.2	116.5	103.0
Canada .....	101.0	99.6	100.1	98.1	101.6	102.7

SOURCE: Same as Table 7.2.

Table 7.3 shows the variations in the sex ratios of different types of migrants for each province between 1956 and 1961. Among movers of all types, Ontario, Saskatchewan, Alberta, British Columbia and the Yukon and Northwest Territories each had an excess of males as opposed to the excess of females for Canada as a whole. The sex ratio of total movers was

highest in Alberta and the Yukon and Northwest Territories and lowest in New Brunswick. The provincial figures also show the predominance of males among long-distance migrants. Only in Prince Edward Island and British Columbia did the number of female movers exceed the number of male movers between non-contiguous provinces. For movers between contiguous provinces, females outnumbered males in Nova Scotia, New Brunswick, Ontario and British Columbia. On the other hand, in most provinces, females exceeded males in intraprovincial and intramunicipal migration; the exceptions were Alberta, British Columbia and the Yukon and Northwest Territories for intraprovincial migration, and Newfoundland, Prince Edward Island, Ontario, Saskatchewan, Alberta and the Yukon and Northwest Territories for intramunicipal migration. However, it may be noted that, on the whole, the sex differential was rather slight, and may be accounted for mainly by the discrepancies in the data.

## 7.2 AGE AND SEX DIFFERENTIALS

An excess of adolescents and young adults among migrants compared with non-migrants or the general population is more or less a universally established fact (Thomas, 1958, p. 313; Thomas, 1938 pp. 11-54). As Everett Lee (1964, p. 128) puts it, internal migrants, like immigrants from abroad, are typically young adults in the ages of greatest productivity and of greatest reproductivity. A typical curve of decade age-specific rates, therefore, would show a peak for the age group 25-29 falling toward both younger and older age groups, forming "roughly a bellshaped curve with long tail to the right" (Eldridge and Thomas, 1964, p. 70). This is understandable because young adults are normally in the transitional period of adjustment from family dependence to independence; from completion of education to selection of a vocation, to entry into the labour force; from single status to marital status. They are at the stage of life when ties and responsibilities are weakest and economic opportunities are normally the best. It would be instructive to know whether the Canadian data follow the general pattern stated above. The intercensal net migration estimates by age and sex obtained from place-of-birth data and the migration data in the 1941 and 1961 Censuses have been used for the analysis. It should be pointed out that the ages shown in the estimates are the ages attained at the end of the relevant migration interval and not the ages at the time of migration. Age at migration would, therefore, be less than that shown by the estimates. For the purpose of the analysis, it may be assumed that everyone moved at the middle of the period concerned.

**7.2.1 COMPARISON OF AGE-SEX DISTRIBUTIONS OF MIGRANTS AND NON-MIGRANTS**—Migration data in the 1941 and 1961 Censuses have been used for the comparison. The data in Table 7.1 showed that, in general, there was a higher percentage of females than of males among non-migrants

## INTERNAL MIGRATION IN CANADA

and a lower percentage of females than of males among migrants. In this section, the main consideration is the age differentials between movers and non-movers for both the sexes. Table 7.4 shows the distributions of movers and non-movers by age and sex for Canada, according to the migration data in the 1961 Census, for 1956-1961. The movers represent all types including local movers (intramunicipal movers). The percentage distributions of movers and non-movers are portrayed in Chart 7.1.

**Table 7.4 – Percentage Distribution of Total Movers and Non-movers, by Age and Sex, 1956-1961, and the Absolute Differences Between the Two Groups**

NOTE. – Percentages for each sex were calculated on the basis of the total for both the sexes.

Age in 1961	Males		Females		Difference	
	Movers	Non-movers	Movers	Non-movers	Male	Female
	A	B	C	D	A - B	C - D
5- 9 .....	7.4	6.5	7.0	6.2	0.9	0.8
10-14 .....	5.2	6.9	5.0	6.6	- 1.7	- 1.6
15-19 .....	3.5	5.4	4.0	4.7	- 1.9	- 0.7
20-24 .....	4.3	2.8	5.8	1.8	1.5	4.0
25-29 .....	6.0	1.7	5.9	1.8	4.3	4.1
30-34 .....	5.7	2.5	5.1	2.9	3.2	2.2
35-39 .....	4.6	3.3	4.3	3.8	1.3	0.5
40-44 .....	3.4	3.6	3.1	3.9	- 0.2	- 0.8
45-49 .....	2.7	3.7	2.5	3.8	- 1.0	- 1.3
50-54 .....	2.0	3.4	1.9	3.3	- 1.4	- 1.4
55-59 .....	1.5	2.9	1.5	2.7	- 1.4	- 1.4
60-64 .....	1.2	2.4	1.2	2.3	- 1.2	- 1.1
65+ .....	2.4	5.5	2.8	5.6	- 3.1	- 2.8
All ages, 5+ ....	49.9	50.6	50.1	49.4	23.1 <sup>a</sup>	22.7 <sup>a</sup>

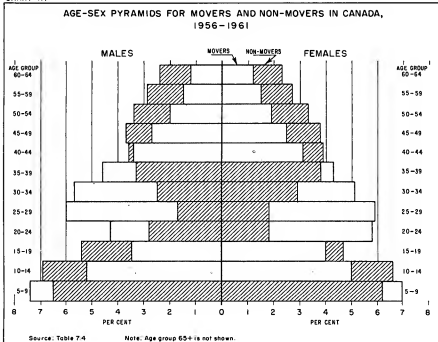
<sup>a</sup> Obtained by summing the differences, disregarding the sign.

SOURCE: Computed from 1961 Census unpublished basic migration tabulations, Table 1.

The data show that the male and female portions of the mobile group are reasonably symmetrical indicating that there were no marked differentials between the age pattern of male and female movers. In fact, the female proportion of total movers was slightly higher than the male proportion during 1956-1961. This is not surprising because the movers considered here are mostly short-distance movers (intramunicipal and intraprovincial) among whom females generally outnumber males. Even for long-distance

movers, a tendency for the sex differentials to level off in recent years is noted earlier in this chapter. The age pattern of movers and non-movers shows that, ignoring the 5-9 age group which makes no migration decisions, only the young adults (the four five-year age groups 20 through 39) are more mobile than the remainder of the population. The age-specific differences between the proportions of movers and non-movers were greatest for the age groups 25-29 and 30-34 for males, and 20-24 and 25-29 for females. Such a pattern of age profile reflects largely the migration of young families (including migration associated with family formation in which the wife tends to be younger than the husband, and the wife tends to move to husband's place of residence and not vice versa).

CHART 7.1



The differences in the age-sex distributions between migrants and non-migrants may be expected to be higher if the comparison is made between the interprovincial migrants and the non-migrants (the population excluding the total interprovincial migrants). Using the 1941 and 1961 migration data, such a comparison has been made for 1936-1941 and 1956-1961 in Table 7.5.

**Table 7.5 – Percentage Distribution of Non-migrants and Interprovincial Migrants, by Age and Sex, 1936-1941 and 1956-1961**

Age at end of period	1936-1941				1956-1961			
	Non-migrants		Migrants		Non-migrants		Migrants	
	Male	Female	Male	Female	Male	Female	Male	Female
5-9 .....	9.9	10.2	6.4	6.6	13.5	13.1	15.3	15.2
10-14 .....	10.4	10.7	10.6	10.8	12.2	11.8	10.2	9.9
15-19 .....	10.6	10.9	9.2	9.4	9.1	8.9	6.2	7.2
20-24 .....	9.7	10.1	7.5	9.1	6.9	7.1	10.7	13.3
25-34 .....	17.0	17.3	22.9	25.9	15.0	15.1	26.6	25.1
35-44 .....	13.7	13.5	21.1	18.9	14.7	15.2	17.0	15.4
45-54 .....	12.1	11.4	12.1	9.8	12.1	11.8	7.6	6.7
55-64 .....	9.3	8.3	6.5	5.4	8.2	8.1	3.1	3.5
65+ .....	7.4	7.5	3.8	4.2	8.3	8.8	3.2	3.8
All ages, 5+ ...	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SOURCES: 1941 Census, Vol. IV, Table 39; 1941 Census, Vol. III, Table 18; 1961 Census unpublished basic migration tabulations, Table 6.

The amount of differences between the two groups in Table 7.5 is a measure of the selectivity of migration for males and females at the given age. The data indicate that, for both males and females, the proportions of interprovincial migrants in the young adult ages 20-44 are much higher than those of non-migrants in 1936-1941 and 1956-1961. The age selectivity was more pronounced for migrants in the recent period than in the 1936-1941 period; for instance, the proportion of male migrants in the age group 25-44 was 23 per cent in 1936-1941 but 27 per cent in 1956-1961. The higher proportion of migrants compared with the non-migrants in the age group 5-9 for the period 1956-1961 suggests that there was increased interprovincial migration of families with young children during this period.

**7.2.2 SELECTIVITY OF GROSS MIGRATION, 1936-1941 AND 1956-1961**—For 1936-1941 only the selectivity of interprovincial migration has been examined, while for 1956-1961, all the main types of migration have been considered. The data used refer to the five-year interval preceding the census dates and refer to persons aged five and over in 1941 and 1961. The gross interprovincial migration for Canada is the sum of interprovincial in-migration or out-migration. Because the amounts of total in-migration

and out-migration are equal, net internal migration for Canada as a whole would be zero. Migration rates calculated on the basis of the relevant total population in 1941 and 1961 have been used for most of the analysis.

**Table 7.6 – Interprovincial Gross Migration Rates, by Age and Sex, 1936-1941 and 1956-1961**

(Rate per 1,000 population at end of period)

Age at end of period	1936-1941		1956-1961		Difference	
	A		B		B - A	
	Male	Female	Male	Female	Male	Female
5-9 .....	14	15	39	39	25	24
10-14 .....	23	23	29	29	6	6
15-19 .....	19	20	24	28	5	8
20-24 .....	17	20	53	61	36	41
25-34 .....	30	34	59	55	29	21
35-44 .....	34	32	40	34	6	2
45-54 .....	22	20	22	19	—	-1
55-64 .....	16	15	13	15	-3	—
65+ .....	12	13	14	15	2	2
All ages, 5+ .....	22	23	34	34	12	11

SOURCE: Same as Table 7.5.

Table 7.6 gives the interprovincial migration rates by age and sex between 1936-1941 and 1956-1961. For both sexes, the rates show a substantial increase in the level of migration between 1941 and 1961. The increase was highest for the age groups 5-9, 20-24 and 25-34. Also, migration reached its peak level at an earlier age in the recent period than in the earlier period. In 1936-1941, migration reached its peak in the age groups 25-34 for females and 35-44 for males, whereas in 1956-1961 the peak rates for females and males were in the age groups 20-24 and 25-34, respectively. Further, the age-specific migration rates for both periods indicated that female migrants were younger than male migrants, a difference that may be attributed mainly to the lower age at marriage for females than for males.

The migration rates given in Table 7.6 are for uneven age groups, which makes it difficult to determine the precise peak age of migration. The 1961 data permit examination of the age pattern of migration by five-

# INTERNAL MIGRATION IN CANADA

year age groups. The five-year age profiles of total interprovincial migrants by sex for 1956 to 1961 are presented in Table 7.7 and Chart 7.2. The rates are obtained in the same way as the rates in Table 7.6 and, in order to take care of the differences in the levels of the over-all migration rates, they are expressed in the form of indices.

**Table 7.7 – Amounts and Rates of Gross Interprovincial Migration, by Age and Sex, 1956 - 1961**

(Rate per 1,000 sample population of indicated age and sex in 1961)

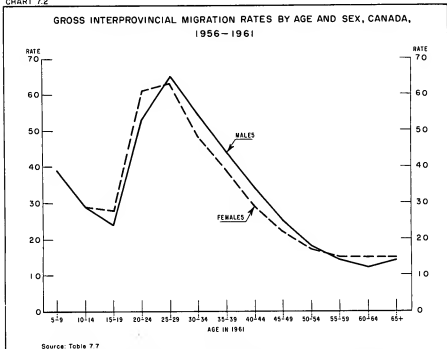
Age in 1961	Males				Females			
	Gross migration	Sample population in 1961	Rate	Index of migration	Gross migration	Sample population in 1961	Rate	Index of migration
	No.	No.			No.	No.		
5 - 9 .....	40,591	1,046,083	39	115	39,353	1,000,787	39	115
10 - 14 .....	26,889	930,128	29	85	25,589	893,212	29	85
15 - 19 .....	16,495	696,182	24	71	18,743	672,516	28	82
20 - 24 .....	28,350	537,910	53	156	34,391	559,461	61	179
25 - 29 .....	37,438	573,417	65	191	35,789	572,107	63	185
30 - 34 .....	32,816	610,773	54	159	29,170	605,755	48	141
35 - 39 .....	26,634	601,669	44	129	24,165	618,786	39	115
40 - 44 .....	18,401	533,798	34	100	15,630	539,746	29	85
45 - 49 .....	12,489	495,350	25	74	10,521	482,270	22	65
50 - 54 .....	7,552	423,379	18	53	6,757	403,290	17	50
55 - 59 .....	4,807	343,974	14	41	4,800	328,745	15	44
60 - 64 .....	3,411	275,656	12	35	4,254	276,566	15	44
65 + .....	8,615	622,791	14	41	9,959	658,270	15	44
All ages, 5+ ...	264,488	7,691,110	34	100	259,121	7,611,511	34	100

SOURCE: 1961 Census unpublished basic migration tabulations, Tables 1 and 6.

The curve of the age-specific rates exhibit a normal shape for both males and females with a peak at ages 25 to 29 and a falling-off toward both younger and older age groups. The selectivity of migration in the age group 25-29 is portrayed more clearly in the indices. Another feature is that, in the younger and older age groups, the rates for females are higher than the rates for males. The population aged 25-29 at the end of the five-year period was in the age group 20-24 at the beginning of the period, so that the migrants had an average age of 22.5 years when they migrated. From this finding it may be inferred that the ages of the highest incidence of migration were between 20 and 25 years and that interprovincial migration

was characterized by youthfulness. The median ages of interprovincial migrants (ages as of 1961) were 27.7 years for males and 26.6 years for females; those for the total sample population in 1961 were 30.5 years for males and 30.9 years for females. If the median age is considered at the mid-point of the migration interval, the median ages of migrants would be 25.2 years for males and 24.1 years for females. Thus, it follows that migrants were not only young but were also younger than the population as a whole. The median ages support the earlier finding that female migrants were younger than male migrants.

CHART 7.2



It is also possible to study the age differentials of different types of migrants using the 1961 migration data. The relevant data are given in Table 7.8 and plotted in Chart 7.3.

There was little difference between the age patterns of different types of migration in Canada for 1956-1961. As noted earlier, the rate of migration among males for all types of migration was highest for the age group 25-29. The male age curves had three main phases, the rates declining to a trough at ages 15-19, then increasing to a peak at 25-29 and gradually declining with advancing age. For females, except for intramunicipal migration and migration between non-contiguous provinces, the highest rate was in the age group 20-24, indicating a lower age for

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female migrants than for male migrants. For migration between non-contiguous provinces and intramunicipal migration, the female rate was highest in the age group 25-29. A common feature of the age pattern that emerges from the data is that, for all the types of migration, the migration rates were higher for age group 5-9 and age groups 20-24 through 35-39 than the rates for all ages among males and females. The slight rise for ages 65 years and over for interprovincial migration reflects "retirement" migration (migration associated with retirement from employment).

**Table 7.8 – Rates of Gross Migration, by Type of Movement, Age and Sex, 1956-1961**

(Rate per 1,000 sample population of indicated age and sex in 1961)

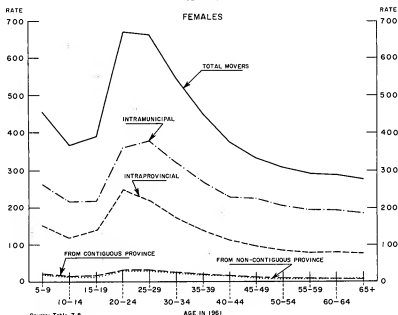
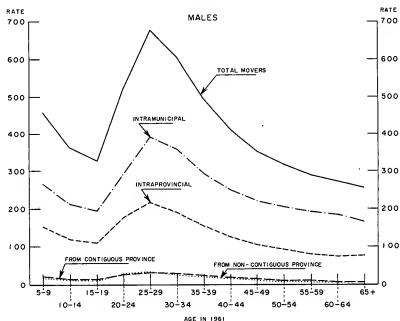
NOTE. — The given figures were adjusted for "not stated" categories by distributing the latter on a prorata basis.

Sex and age in 1961	Sample population in 1961	Total movers	Intra- muni- cipal	Intra- provin- cial	Between contig- uous provinces	Between non- contig- uous provinces
	No.					
<b>Males —</b>						
5-9 .....	1,046,083	457	264	152	21	18
10-14 .....	930,128	362	213	118	15	14
15-19 .....	696,182	327	193	109	13	11
20-24 .....	537,910	520	288	176	26	27
25-29 .....	573,417	677	392	216	32	33
30-34 .....	610,773	605	358	190	29	25
35-39 .....	601,669	494	293	154	23	21
40-44 .....	533,798	411	249	126	18	16
45-49 .....	495,350	351	220	104	14	11
50-54 .....	423,379	314	204	91	10	8
55-59 .....	343,974	288	193	79	8	6
60-64 .....	275,656	272	185	73	6	6
65+ .....	622,791	255	166	74	7	7
<b>Totals, males ....</b>	<b>7,691,110</b>	<b>421</b>	<b>251</b>	<b>133</b>	<b>18</b>	<b>16</b>
<b>Females —</b>						
5-9 .....	1,000,787	455	262	152	21	19
10-14 .....	893,212	365	217	118	15	14
15-19 .....	672,516	390	219	140	16	13
20-24 .....	559,461	672	358	249	32	29
25-29 .....	572,107	663	377	220	32	30
30-34 .....	605,755	544	321	172	25	23
35-39 .....	618,786	448	270	137	20	19
40-44 .....	539,746	374	231	112	15	14
45-49 .....	482,270	332	214	95	12	10
50-54 .....	403,290	307	206	83	9	7
55-59 .....	328,745	290	194	79	8	6
60-64 .....	276,566	287	193	77	8	7
65+ .....	658,270	276	185	75	7	8
<b>Totals, females ..</b>	<b>7,611,511</b>	<b>427</b>	<b>254</b>	<b>137</b>	<b>18</b>	<b>16</b>

SOURCE: 1961 Census unpublished basic migration tabulations, Table 1.

CHART 7.3

# AGE AND SEX DISTRIBUTION OF VARIOUS TYPES OF MIGRATIONS, CANADA, 1956-1961



Source: Table 7.8

### 7.2.3 DIFFERENTIALS AMONG IN-MIGRANTS AND OUT-MIGRANTS—

The decade interprovincial estimates of migration, 1931-1941 to 1951-1961 and the interregional estimates of migration for 1956-1961 are used for the analysis in this section. Although the estimates of in-migration and out-migration from place-of-birth data give some insight into gross intercensal internal migration, their limitations mentioned in Chapters Three and Six should be kept in mind in interpreting these estimates. Because of their limitations, it was preferred to call them estimates of net migration of the out-born and estimates of net migration of the in-born instead of in-migration and out-migration, respectively. As noted in Chapter Six, for some age groups for some provinces net migration of the out-born is outward and net migration of the in-born is inward. For certain provinces, like Saskatchewan in 1931-1941 and 1941-1951 and Manitoba in 1931-1941, total net migration (for all ages together) of the out-born is outward (for both the sexes in the former province and for males in the latter). The intercensal net migration estimates of the out-born and the in-born and the net balance for the three intercensal periods, by age and sex, are expressed in the form of rates per 1,000 average population and presented in Appendix Table A.2. The rates of in-born, out-born and net balance of migration for selected provinces are shown in Chart 7.4.

It is mentioned in Chapter Six that the opposite directions of net migration of in-born and out-born can be attributed mainly to secondary and return migration, an observation supported by the age pattern of migration shown in Appendix Table A.2. The opposite direction of migration, particularly migration of the in-born, is more prevalent in the ages above 55. The rough estimation of the extent of return migration given in Chapter Six indicates that return migration was highest during the decade 1931-1941. Despite the effect of return migration, in most ages for all provinces, net migration of the out-born was inward and net migration of the in-born was outward in all the three decades; the exceptions were mostly confined to older age groups. As Eldridge (1965<sup>a</sup>, p. 70) points out, the older age groups had more opportunity than the younger to build up reservoirs of population living outside their province of birth and so to produce migration balance in the opposite direction. Thus, much of the opposite direction of migration, particularly in the older ages, represents return migration to the province of birth during old age and retirement.

The data show that, although there were differences in level, the age profiles of migration of the in-born and out-born were similar for males and females in most provinces. The similarity was more noticeable in 1951-1961 than in the two previous decades. The main findings of the migration pattern among in-born and out-born population may be summarized as follows: (1) in general, the rates were higher for the young adult age groups, 25-29, which agrees with the finding in Section 7.2.2 where the

CHART 7.4

RATES OF NET MIGRATION OF IN-BORN, OUT-BORN AND RATES OF NET BALANCE  
FOR CANADIAN BORN 10 YEARS OLD AND OVER, BY AGE AND SEX,  
SELECTED PROVINCES OF CANADA, 1931-1941, 1941-1951, AND 1951-1961

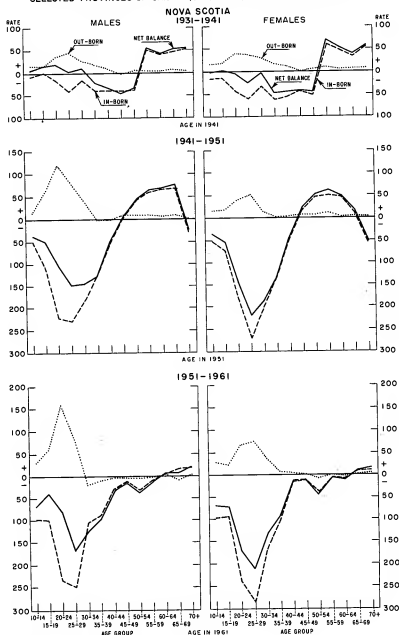


CHART 7.4

RATES OF NET MIGRATION OF IN-BORN, OUT-BORN AND RATES OF NET BALANCE  
FOR CANADIAN BORN 10 YEARS OLD AND OVER, BY AGE AND SEX,  
SELECTED PROVINCES OF CANADA, 1931-1941, 1941-1951, AND 1951-1961

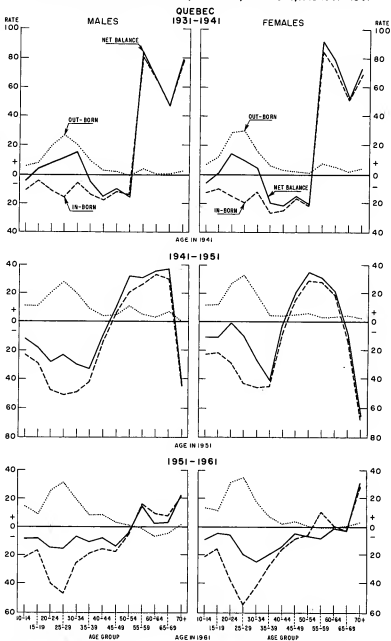
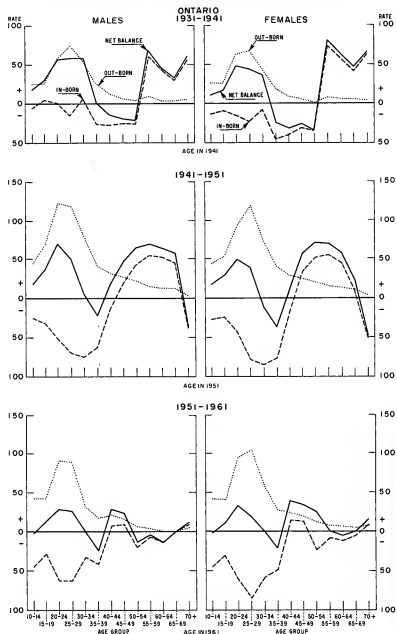


CHART 7.4

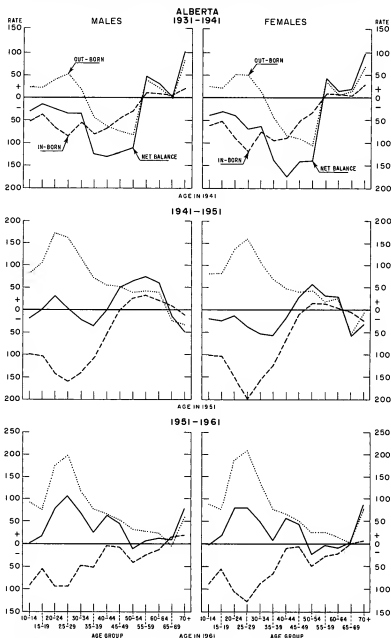
RATES OF NET MIGRATION OF IN-BORN, OUT-BORN AND RATES OF NET BALANCE  
FOR CANADIAN BORN 10 YEARS OLD AND OVER, BY AGE AND SEX,  
SELECTED PROVINCES OF CANADA, 1931-1941, 1941-1951 AND 1951-1961



Source: Appendix, Table A.2

CHART 7.4

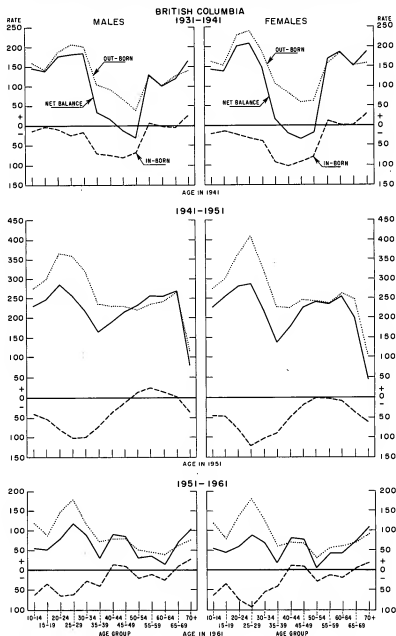
**RATES OF NET MIGRATION OF IN-BORN, OUT-BORN AND RATES OF NET BALANCE FOR CANADIAN BORN 10 YEARS OLD AND OVER, BY AGE AND SEX, SELECTED PROVINCES OF CANADA, 1931-1941, 1941-1951, AND 1951-1961**



Source: Appendix, Table A.2

CHART 7.4

RATES OF NET MIGRATION OF IN-BORN, OUT-BORN AND RATES OF NET BALANCE  
FOR CANADIAN BORN 10 YEARS OLD AND OVER, BY AGE AND SEX,  
SELECTED PROVINCES OF CANADA, 1931-1941, 1941-1951, AND 1951-1961



Source: Appendix, Table A 2

age profiles of the gross migrants are examined; (2) the rate in the 10-14 age group tended to be higher than that in the 15-19 age group, probably because young mothers were more mobile than older mothers and had younger children who generally migrated with them; and (3) the rates tended to show a minor second peak at the older age group, 65-69, which might have been the effect of migration in connection with retirement and widowhood.

Because the estimates of migration for the terminal age interval 70+ are likely to be less reliable than the estimates for other age groups, it was decided to ignore the migration pattern in this age group. On the whole, the age pattern of migration for males and females exhibited little difference.

The 1961 migration statistics provide promising data for detailed analysis of age-sex differentials by provinces for the recent period 1956-1961. Because of the small amounts of interprovincial migration in some of the provinces and the possible errors in interpreting such figures, the analysis of the age pattern of migrants is confined to the regional level; it is based on age-specific rates of in-migration, out-migration and net migration of males and females for each region. The rates are presented in Table 7.9 and Chart 7.5. Rates of out-migration are inverted in the charts for conveniences of comparisons between the curves of in-migration and out-migration.

It can be seen from Chart 7.4 that, by and large, there is a close similarity between the curves of in-migration and out-migration. The data display the typical pattern of high migration rates at the young adult ages, followed by lower rates at the older ages. Between 1956 and 1961, the Atlantic region had abnormally high rates of out-migration in the age groups 20-24 and 25-29, followed by high rates of in-migration in these two age groups for the Western region (British Columbia and the Yukon and Northwest Territories), indicating heavy flow of migration from the former region to the latter. The sex distribution of regional migration showed some differences between in-migration and out-migration. Of the two gaining regions, Western region and Ontario, the former had higher rates of in-migration among females than among males. On the other hand, for all three losing regions females had higher rates of out-migration than males. Such a pattern suggests that the level of interregional migration was higher for females than for males between 1956 and 1961. This is evident from the rates of net migration which were higher among females than among males for all regions. One notable feature of the data is the close correspondence between the direction of net migration in all ages together and in individual age groups for all regions. Each age group showed a consistent gain for all the gaining regions and a consistent loss for all the losing regions among both males and females.

# DIFFERENTIALS AMONG IN-MIGRANTS AND OUT-MIGRANTS

With regard to the peak rate of migration, there were some variations among the regions. Except for the Atlantic region, the rates of in-migration and out-migration for both sexes were highest in the age group 25-29; for the Atlantic region, the out-migration rate among females was highest in the age group 20-24. This suggests that there was very little difference in the median ages of in-migrants and out-migrants. The median ages of male in-migrants and out-migrants as of 1961 for the regions were:

	<u>Atlantic</u>	<u>Western</u>	<u>Prairies</u>	<u>Ontario</u>	<u>Quebec</u>
In-migrants.....	26.7	29.2	27.7	27.4	28.0
Out-migrants.....	25.1	28.5	28.6	28.2	28.3

As regards net migration, only three regions—Atlantic, Western and Ontario—had the typical “bell-shaped” curves with the peak at the prime ages. However, unlike the age-specific curves of in-migration and out-migration which had the peak at the age group 25-29, the peak net migration rate for these three regions was in the age group 20-24, with the one exception of female rates for the Western region which was in the age group 25-29. The difference in the peak rates for net migration and for in- and out-migration is understandable because net migration is the difference between in- and out-migration, both of which had peak rates in the same age group. Thus, the age difference in the peak rates for net migration compared with the peak rates for in- and out-migration should be considered as the offsetting effects of the same peak rate for the inward and outward migration streams.

With two or three exceptions, a similar pattern was observed for interprovincial net migration as well (Appendix Table A.3). The rates for Quebec and the Prairies showed irregular patterns for both males and females. Ignoring the net migration rates for the terminal age interval, which are hardly reliable, the highest rates for the Prairies were in the age groups 35-39 for males and 60-64 for females. For Quebec, the rates for both the sexes were much lower than those for other regions; the highest rate for males was in the age group 60-64 followed by the age group 50-54 and the highest rate for females was in the age group 30-34 followed by the age group 45-49. The unusual migration patterns for Quebec and the Prairies, both of which had net migration losses, may be associated with reverse or return migration between 1956 and 1961 from these regions. The return migration normally takes place at the older ages (Eldridge and Thomas, 1964, p. 153; Eldridge, 1965<sup>b</sup>, pp. 444-455).<sup>2</sup>

The percentage distributions of migration by age also show the age selectivity in migration. For Canada as a whole nearly 50 per cent of all interprovincial migration between 1956 and 1961 was in the ages 20-39

**Table 7.9 – Rates of Interregional In-migration, Out-migration and Net Migration of Population Aged Five and Over, by Age and Sex, 1956-1961**

(Rate per 1,000 sample population of indicated age and sex in 1961)

No.	Region	5-9	10-14	15-19	20-24	25-29	30-34
<b>Males</b>							
<b>Atlantic –</b>							
1	In-migration .....	31.4	20.4	11.2	39.2	59.5	53.3
2	Out-migration .....	- 38.7	- 27.0	- 31.7	- 108.0	- 102.4	- 67.2
3	Net migration .....	- 7.3	- 6.6	- 20.5	- 68.8	- 42.9	- 13.9
<b>Ontario –</b>							
4	In-migration .....	32.5	25.3	24.2	48.6	53.9	39.4
5	Out-migration .....	- 28.4	- 19.9	- 14.1	- 32.4	- 42.3	- 36.0
6	Net migration .....	4.1	5.4	10.1	16.2	11.6	3.4
<b>Quebec –</b>							
7	In-migration .....	17.3	11.6	9.1	18.6	28.3	25.5
8	Out-migration .....	- 18.0	- 13.5	- 11.0	- 19.3	- 28.6	- 25.6
9	Net migration .....	- 0.7	- 1.9	- 1.9	- 0.7	- 0.3	- 0.1
<b>Prairies –</b>							
10	In-migration .....	36.0	25.9	18.9	51.3	64.3	53.7
11	Out-migration .....	- 47.1	- 39.0	- 30.7	- 54.5	- 74.2	- 63.1
12	Net migration .....	- 11.1	- 13.1	- 11.8	- 3.2	- 9.9	- 9.4
<b>Western –<sup>a</sup></b>							
13	In-migration .....	70.9	58.8	54.0	93.9	111.2	91.6
14	Out-migration .....	- 51.3	- 36.4	- 29.6	- 64.1	- 93.0	- 74.4
15	Net migration .....	19.6	22.4	24.4	29.8	18.2	17.2
<b>Females</b>							
<b>Atlantic –</b>							
16	In-migration .....	31.9	20.2	12.8	36.8	56.5	46.3
17	Out-migration .....	- 40.6	- 27.1	- 39.8	- 120.8	- 92.3	- 62.1
18	Net migration .....	- 8.7	- 6.9	- 27.0	- 84.0	- 35.8	- 15.8
<b>Ontario –</b>							
19	In-migration .....	34.4	25.7	28.8	56.8	48.3	37.2
20	Out-migration .....	- 27.4	- 19.3	- 17.0	- 33.0	- 41.5	- 32.3
21	Net migration .....	7.0	6.4	11.8	23.8	6.8	4.9
<b>Quebec –</b>							
22	In-migration .....	17.3	11.0	10.1	24.2	27.9	21.1
23	Out-migration .....	- 18.7	- 13.7	- 12.2	- 24.2	- 28.6	- 24.3
24	Net migration .....	- 1.4	- 2.7	- 2.1	-	- 0.7	- 3.2
<b>Prairies –</b>							
25	In-migration .....	33.7	26.9	23.0	55.3	61.9	48.4
26	Out-migration .....	- 48.6	- 39.0	- 34.5	- 69.6	- 74.6	- 60.7
27	Net migration .....	- 14.9	- 12.1	- 11.5	- 14.3	- 12.7	- 12.3
<b>Western –<sup>a</sup></b>							
28	In-migration .....	72.1	59.1	58.9	106.7	115.3	87.4
29	Out-migration .....	- 51.1	- 39.2	- 31.9	- 72.1	- 78.2	- 59.0
30	Net migration .....	21.0	19.9	27.0	34.6	37.1	28.4

<sup>a</sup> Western refers to British Columbia and the Yukon and Northwest Territories.

SOURCE: Same as Table 7.7.

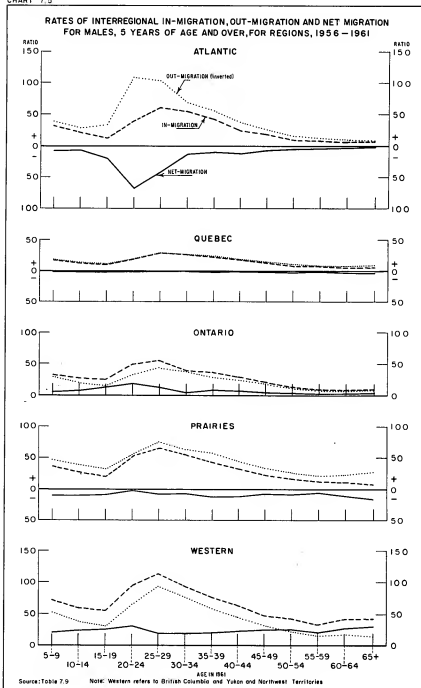
*DIFFERENTIALS AMONG IN-MIGRANTS AND OUT-MIGRANTS*

**Table 7.9 – Rates of Interregional In-migration, Out-migration and Net Migration of Population Aged Five and Over, by Age and Sex, 1956-1961**

(Rate per 1,000 sample population of indicated age and sex in 1961)

35-39	40-44	45-49	50-54	55-59	60-64	65+	Total	No.
<b>Males</b>								
42.4	23.9	16.4	8.4	6.7	6.1	6.1	25.5	1
- 54.5	- 36.9	- 24.1	- 13.7	- 11.2	- 9.1	- 7.8	- 40.9	2
- 12.1	- 13.0	- 7.7	- 5.3	- 4.5	- 3.0	- 1.7	- 15.4	3
35.0	28.4	20.1	13.3	9.9	8.4	9.7	28.4	4
- 28.0	- 22.8	- 16.6	- 11.1	- 8.5	- 6.5	- 6.9	- 22.5	5
6.9	5.6	3.5	2.2	1.4	1.9	2.8	5.9	6
21.9	17.5	12.5	7.6	7.2	4.8	5.4	15.4	7
- 24.2	- 18.5	- 14.7	- 10.4	- 7.8	- 7.7	- 9.0	- 16.9	8
- 2.3	- 1.0	- 2.2	- 2.8	- 0.6	- 2.9	- 3.6	- 1.5	9
42.6	31.8	22.2	15.2	10.6	10.5	8.5	31.2	10
- 56.8	- 43.9	- 31.8	- 24.9	- 20.1	- 21.9	- 25.2	- 42.5	11
- 14.3	- 12.1	- 9.6	- 9.7	- 9.5	- 11.4	- 16.7	- 11.3	12
74.9	62.3	48.5	43.0	33.3	40.3	41.0	64.4	13
- 57.6	- 44.4	- 30.2	- 20.6	- 14.3	- 14.5	- 12.4	- 42.9	14
17.3	17.9	18.3	22.4	19.0	25.8	28.6	21.5	15
<b>Females</b>								
36.0	18.6	11.0	7.9	8.6	4.2	8.9	24.2	16
- 47.5	- 32.1	- 21.6	- 19.9	- 13.4	- 15.2	- 11.4	- 42.3	17
- 11.5	- 13.5	- 10.6	- 12.0	- 4.8	- 11.0	- 2.5	- 18.1	18
30.8	24.4	17.9	13.9	10.0	10.1	10.4	28.2	19
- 25.5	- 17.8	- 13.8	- 9.0	- 8.7	- 7.2	- 7.4	- 21.2	20
5.3	6.6	4.1	4.9	1.3	2.9	3.0	7.0	21
19.5	13.7	9.9	6.1	8.0	6.6	6.8	15.0	22
- 21.2	- 15.9	- 12.9	- 9.1	- 9.2	- 9.0	- 10.6	- 17.0	23
- 1.7	- 2.2	- 3.0	- 3.0	- 1.2	- 2.4	- 3.8	- 2.0	24
36.4	27.1	17.8	13.2	10.3	12.7	13.9	31.0	25
- 53.0	- 39.6	- 31.5	- 27.2	- 22.1	- 31.8	- 26.9	- 44.5	26
- 16.6	- 12.5	- 13.7	- 14.0	- 11.8	- 19.1	- 13.0	- 13.5	27
70.0	52.7	48.3	43.0	41.1	53.5	37.3	65.3	28
- 46.0	- 35.4	- 21.6	- 16.6	- 16.4	- 15.0	- 18.4	- 40.1	29
24.0	17.3	26.7	26.4	24.7	38.5	18.9	25.2	30

CHART 7.5



for both sexes (47.4 per cent for males and 47.7 per cent for females). A similar pattern was found for regional migration where the percentages varied from 50 to 42 for in-migrants and 54 to 43 for out-migrants among males and females. Migrant children (interprovincial and interregional), constituting about 15 per cent in the age group 5-9, had the highest percentage in one single age group for 1956 to 1961.

### 7.3 CANADIAN-BORN AND FOREIGN-BORN MIGRATION

The age-sex differentials of the Canadian-born and foreign-born migrants are examined in this section, using the decade interprovincial net migration estimates for the foreign born, 1931 to 1961 (Table 3.15), and the separate statistics of Canadian-born and foreign-born interprovincial migration from the 1961 Census. While the former data refer to the sum of internal and international migration of the foreign born for the provinces, the latter data represent only interprovincial migration between 1956 and 1961 of the foreign-born population residing in Canada in 1956. The analysis is made for Canada as a whole and not for individual provinces. For the sake of convenience, migration rates computed on the basis of the total population (foreign-born plus Canadian-born) are used here, which show the impact of the particular type of migration on the general population. The ratios shown are, therefore, lower than they would have been had they been calculated on the basis of the population of each group. The decade net migration rates are the balances of provincial migration gains and losses in the given age-sex group per 1,000 average total population of the same age and sex for Canada. The rates for 1956 to 1961 are the age-specific gross interprovincial migration rates of the Canadian born and foreign born for Canada. The relevant data are presented in Tables 7.10 and 7.11.

Two specific movements are involved in the net migration estimates of the foreign born for Canada as a whole, namely, immigration into Canada and emigration from Canada. Most of the emigration may be considered either as return migration to the country of origin or migration from Canada to the United States. Only in 1931 to 1941 was there a net loss of foreign-born migration among males. The loss among males occurred in the age groups 25-29 through 50-54. Although females had a net gain for all ages together in 1931-1941, they suffered net losses in the age groups 35-39 through 50-54. In 1931-1941 the rate was highest in the age group 45-49 for both males and females, constituting reverse migration. The age-specific rates for 1941-1951 and 1951-1961 showed the normal pattern with the selectivity of migration at the prime ages. It might be expected that the pattern of age-specific rates for the internal migration of the foreign born would indicate a somewhat older peak age group than the pattern of rates for Canadian-born population because internal movements

**Table 7.10 – Rates of Decade Interprovincial Net Migration of Foreign-born Population Aged 10 and Over, by Age and Sex, 1931-1941, 1941-1951 and 1951-1961**

(Rate per 1,000 average decade total population of specified sex and age)

Age at end of decade	1931-1941		1941-1951		1951-1961	
	Male	Female	Male	Female	Male	Female
10-14 .....	11	12	21	19	63	61
15-19 .....	7	7	21	17	50	48
20-24 .....	2	3	33	36	93	102
25-29 .....	- 5	9	56	74	156	144
30-34 .....	- 8	5	45	50	165	135
35-39 .....	- 44	- 14	41	32	118	94
40-44 .....	- 46	- 22	34	27	79	62
45-49 .....	- 48	- 32	32	32	63	54
50-54 .....	- 47	- 30	25	33	46	40
55-59 .....	7	19	22	23	27	29
60-64 .....	10	15	19	12	21	21
65-69 .....	6	14	18	2	7	11
70+ .....	28	26	- 7	- 11	25	30
All ages, 10+ .....	- 9	1	29	29	76	69

SOURCE: Computed from Table 3.15.

of the foreign born necessarily represent at least the second move. However, since the data used here are the net migration of the foreign born between Canada and elsewhere and not internal migration proper, the expected pattern was not observed. The peak rate was in the age group 25-29 for the past two decades, with the one exception of that for males in 1951-1961 which was in the 30-34 age group. The peak migration rate for the Canadian-born population in all the three decades was in the age group 25-29 (Table A.2).

Table 7.11 provides internal migration data for comparison of the age-specific rates between Canadian-born and foreign-born populations for 1956 to 1961. The data used are the gross interprovincial migration rates for the Canadian born and the foreign born by age and sex. Close similarity is shown between the migration pattern of males and of females for both groups. As expected, the pattern of age-specific rates for the foreign-born population showed an older peak age group (30-34) than the age pattern for the Canadian born (25-29).

**Table 7.11 – Amounts and Rates of Canadian-born and Foreign-born Gross Interprovincial Migration of Population Aged Five and Over, by Age and Sex, 1956-1961**

(Rate per 1,000 total sample population in 1961 of specified sex and age)

Age in 1961	Canadian born				Foreign born			
	Amounts		Rates		Amounts		Rates	
	Male	Female	Male	Female	Male	Female	Male	Female
	No.	No.			No.	No.		
5-14 .....	61,202	58,914	31	31	2,746	2,534	1	1
15-19 .....	13,345	15,438	19	23	1,293	1,314	2	2
20-24 .....	24,666	30,129	46	54	1,199	1,376	2	2
25-29 .....	30,745	30,485	54	53	3,143	2,213	5	4
30-34 .....	25,538	23,432	42	39	4,677	3,576	8	6
35-44 .....	34,333	30,212	30	26	7,601	6,965	7	6
45-64 .....	18,541	17,192	12	11	8,016	7,393	5	5
65+ .....	3,919	4,941	6	7	4,180	4,298	7	6
All ages, 5+ .....	212,289	210,743	28	28	32,855	29,669	4	4

SOURCES: 1961 Census unpublished basic migration tabulations, Tables 9 and 10; and 1961 Census, Bul. 4.1-9, Table 11.

## 7.4 MARITAL STATUS DIFFERENTIALS

The cross-tabulations of the 1951 migration statistics by marital status make it possible to examine the differentials in marital status of non-migrants and migrants and among different types of migrants. The differentials are examined by comparing the marital status distributions of non-migrants and various types of migrants by type of residence in 1961. The marital status distributions given here refer to the 1961 Census data and not to the marital status at the time of migration. Hence, it would be difficult to generalize from these data regarding the relative propensity among the three marital status groups to migrate. For example, with reference to widowed migrants, some might have had widowhood status throughout the migration period, others might have migrated before they became widowed, and the remaining might not have been widowed before 1956 but later become widowed and then migrated. Thus, if widowed persons show a higher migration rate than married migrants in 1961 it does not necessarily follow that widowed persons have a higher propensity to migrate than married persons.

## INTERNAL MIGRATION IN CANADA

**Table 7.12 – Marital Status Distributions of Non-migrants and Migrants  
Aged 15 and Over, by Sex, Type of Migration  
and Type of Residence, 1956- 1961**

Type of residence and marital status in 1961	Non-movers	Movers	Same municipality	Intra-provincial	From contiguous province	From non-contiguous province
Males						
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Urban .....	100.0	100.0	100.0	100.0	100.0	100.0
Single .....	29.0	22.7	22.2	23.3	24.8	24.3
Married .....	67.1	74.6	74.8	74.6	73.3	74.0
Widowed and divorced	3.9	2.7	3.0	2.1	1.9	1.7
Rural non-farm .....	100.0	100.0	100.0	100.0	100.0	100.0
Single .....	33.6	22.0	23.6	20.9	20.1	18.7
Married .....	61.8	75.2	73.3	76.4	77.7	79.3
Widowed and divorced	4.6	2.8	3.1	2.7	2.2	2.0
Rural farm .....	100.0	100.0	100.0	100.0	100.0	100.0
Single .....	39.9	34.6	32.5	36.0	42.1	43.9
Married .....	57.1	62.5	64.8	60.7	56.0	53.1
Widowed and divorced	3.0	2.9	2.7	3.3	1.9	3.0
Canada .....	100.0	100.0	100.0	100.0	100.0	100.0
Single .....	32.0	23.2	22.7	23.5	24.7	23.9
Married .....	64.0	74.1	74.3	74.2	73.3	74.3
Widowed and divorced	4.0	2.7	3.0	2.3	2.0	1.8
Females						
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Urban .....	100.0	100.0	100.0	100.0	100.0	100.0
Single .....	24.3	19.4	18.9	20.7	19.7	19.3
Married .....	63.1	71.8	71.3	72.2	74.2	73.9
Widowed and divorced	12.6	8.8	9.8	7.1	6.1	6.8
Rural non-farm .....	100.0	100.0	100.0	100.0	100.0	100.0
Single .....	22.4	14.1	15.0	13.9	11.5	10.1
Married .....	66.1	79.6	77.7	80.3	83.7	85.6
Widowed and divorced	11.5	6.3	7.3	5.8	4.8	4.3
Rural farm .....	100.0	100.0	100.0	100.0	100.0	100.0
Single .....	24.6	15.1	16.1	14.3	12.7	12.1
Married .....	69.3	79.8	79.2	80.5	81.3	78.5
Widowed and divorced	6.1	5.1	4.7	5.2	6.0	9.4
Canada .....	100.0	100.0	100.0	100.0	100.0	100.0
Single .....	24.0	18.5	18.3	18.8	18.1	17.6
Married .....	64.6	73.2	72.3	74.5	76.0	76.0
Widowed and divorced	11.4	8.3	9.4	6.7	5.9	6.4

SOURCE: 1961 Census unpublished basic migration tabulations, Table 2.

Table 7.12 summarizes the marital status distributions of non-movers and various types of movers by type of residence in 1961. The data show that the proportions of married were higher and those of single and widowed were lower among movers than among non-movers for both the sexes. The proportion of married among total non-movers was about 64 per cent and among total movers about 74 per cent.<sup>3</sup> The sex distributions of movers show that the proportions of single and married were higher among males than among females and that the proportions of widowed and divorced were higher among females than among males. There was little difference in the marital status distributions of the various types of movers for both the sexes; the only notable difference was that interprovincial migrants had higher proportions of single persons among males than among females and higher proportions of married among females than among males.

Substantial variations were observed in the marital status distributions of migrants and non-migrants living in urban, rural non-farm and rural farm communities. Among male non-movers, the proportions of single were highest in rural farm areas followed by rural non-farm and urban areas; the proportions of married were highest in urban areas followed by rural non-farm and rural farm areas; and the proportions of widowed were highest in rural non-farm areas followed by urban and rural farm areas. Among female non-movers, rural farm areas had the highest proportions of single and married and the lowest proportions of widowed and divorced; the urban areas had the highest proportions of widowed and divorced with rural non-farm areas occupying an intermediate position. The male and female movers did not have the same patterns of marital status distributions as those of non-movers. Unlike male non-movers, the proportions of married movers were highest in the rural non-farm areas followed by urban areas, with little difference in the proportions of widowed and divorced in the three areas. Among female movers, the proportions of married were highest in the rural farm areas followed by rural non-farm and urban areas; the proportions of single, widowed and divorced were highest in the urban areas.

Rural farm areas had the highest proportions of single male movers even when distance of migration was taken into account, the proportions of single persons increasing with the increase in the distance of migration. Such a pattern was observed among the various types of movements in urban areas as well, but in rural non-farm areas the proportions of single male movers decreased with increasing distance of migration. There was very little variation in the married male proportions among the various types of movers in urban areas. The proportions of widowed and divorced male movers decreased with the increase in distance of migration in urban and rural non-farm areas. Among female movers, there was very little variation in the proportions of single among the various types of migration in urban areas; in the rural non-farm and rural farm areas, the proportions

**Table 7.13 – Marital Status Distributions of Migrants, by Age,  
Sex and Type of Migration, 1956-1961**

Marital status and age in 1961	Total movers	Same municipality	Intra-provincial	Between contiguous provinces	Between non-contiguous provinces
Single –	Males				
	p. c.	p. c.	p. c.	p. c.	p. c.
15-19 .....	42.7	39.2	41.5	34.7	32.6
20-24 .....	22.7	21.2	27.4	29.0	29.9
25-29 .....	9.6	10.9	10.8	14.4	15.7
30-34 .....	5.7	7.2	5.6	8.3	8.6
35-44 .....	7.1	8.5	6.1	7.3	7.0
45-64 .....	8.8	9.7	6.1	4.7	4.8
65+ .....	3.4	3.4	2.4	1.5	1.5
Totals, single .....	100.0	100.0	100.0	100.0	100.0
Married –					
15-19 .....	0.2	0.4	0.4	0.3	0.3
20-24 .....	4.4	7.8	8.2	8.5	11.3
25-29 .....	10.7	17.4	18.7	19.5	21.9
30-34 .....	13.2	17.9	18.9	20.3	18.8
35-44 .....	25.8	25.6	26.4	28.5	27.8
45-64 .....	34.4	24.6	21.8	18.4	15.4
65+ .....	11.4	6.3	5.6	4.0	4.4
Totals, married .....	100.0	100.0	100.0	100.0	100.0
Widowed and divorced –					
15-19 .....	0.0	0.0	0.0	—	0.1
20-24 .....	0.2	0.3	0.2	1.0	1.1
25-29 .....	0.8	1.5	1.5	2.9	3.5
30-34 .....	1.6	2.6	2.9	3.9	4.8
35-44 .....	5.7	8.8	8.5	14.9	14.0
45-64 .....	27.3	31.9	27.9	31.6	26.3
65+ .....	64.4	54.8	59.1	45.7	50.2
Totals, widowed and divorced	100.0	100.0	100.0	100.0	100.0

Table 7.13 – Marital Status Distributions of Migrants, by Age, Sex and Type of Migration, 1956- 1961 – concluded \*

Marital status and age in 1961	Total movers	Same municipality	Intra-provincial	Between contiguous provinces	Between non-contiguous provinces
<b>Females</b>					
<b>Single –</b>	p.c.	p.c.	p.c.	p.c.	p.c.
15-19 .....	50.0	44.4	51.5	45.7	41.6
20-24 .....	17.4	16.9	25.5	27.1	26.0
25-29 .....	6.4	7.8	7.1	9.9	13.1
30-34 .....	4.4	5.9	3.5	5.7	6.0
35-44 .....	7.1	9.2	4.8	5.9	7.0
45-64 .....	10.3	11.8	5.4	3.8	4.6
65+ .....	4.5	4.1	2.3	1.9	1.7
<b>Totals, single .....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Married –</b>					
15-19 .....	1.5	2.5	3.1	2.6	2.4
20-24 .....	8.2	14.4	17.3	16.7	17.3
25-29 .....	12.5	18.0	19.6	21.0	21.7
30-34 .....	13.8	16.5	16.7	18.1	17.9
35-44 .....	26.4	23.9	22.8	24.5	25.0
45-64 .....	29.8	20.6	17.0	14.9	13.1
65+ .....	7.3	4.0	3.4	2.3	2.7
<b>Totals, married .....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Widowed and divorced –</b>					
15-19 .....	0.0	0.0	0.1	0.0	0.1
20-24 .....	0.3	0.5	0.8	0.4	1.5
25-29 .....	0.8	1.5	1.7	2.6	2.8
30-34 .....	1.5	2.3	2.8	3.8	3.6
35-44 .....	6.4	8.6	8.9	10.6	10.1
45-64 .....	34.7	38.0	36.0	37.2	32.5
65+ .....	56.3	49.2	49.8	45.4	49.4
<b>Totals, widowed and divorced</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

SOURCE: 1961 Census unpublished basic migration tabulations, Table 2.

of single had a negative association with distance of migration. There was a direct association between distance of migration and the proportions of married female movers in all three areas. On the other hand, the association between distance and the proportions of widowed and divorced was negative in urban and rural non-farm areas and positive in rural farm areas.

The marital status distributions by age and sex for different types of migration are presented in Table 7.13. It is quite natural to find the single migrants predominantly young compared with the married and the widowed and divorced migrants. The age groups with the highest proportions of single, married, and widowed and divorced were 15-19, 35-44, and 65 and over, respectively, for the various types of migration among males and females. The age-sex pattern of single, married, and widowed and divorced migrants remained basically the same for all types of migration considered here. However, compared with male migrants, female migrants had higher proportions of single and married in the younger ages and higher proportions of widowed and divorced in the older ages. Among the different types of migration, there was some association between distance and age of single migrants. The long-distance single movers (interprovincial movers) had lower proportions than short-distance movers in the age group 15-19 and higher proportions in the ages 20-34.

## 7.5. SUMMARY

Historical data on interprovincial migration in Canada reveal a tendency for the sex differentials to narrow among migrants over time, which suggests the possibility of increased labour force participation among females in recent years. The sex ratios of migrants varied more or less directly with distance. Among the total migrants between 1956 and 1961, Ontario, Saskatchewan, Alberta, British Columbia and the Yukon and Northwest Territories had an excess of males, in contrast to the excess of females for Canada as a whole.

There were no marked differences between the age patterns of male and female migrants. A comparison of the age pattern of migrants and non-migrants showed that the age selectivity of migration was in the four five-year age groups, 20 through 39. All the available evidence indicates that migrants are generally younger than the total population. For Canada as a whole, nearly 50 per cent of all interprovincial migration between 1956 and 1961 was in the ages 20-39 for both the sexes. The age-specific migration rates for 1956-1961 exhibited a normal shape for both males and females with a peak at ages 25-29, falling toward both younger and older age groups. The median age of migrants at the midpoint of the migration interval for 1956-1961 was 25.2 years for males and 24.1 years for females. There was little difference in the age pattern of different types of migration in Canada for the period 1956-1961.

Data on decade net migration by age show that the age profiles of migration of the in-born and out-born were similar for males and females in most provinces. The migration data for 1956-1961 also show such similarity between the age curves of in-migrants and out-migrants. As regards net migration, only three regions—Atlantic, Western and Ontario—had the typical “bell-shaped” curves with the peak at the prime ages. However, unlike the age-specific curves of in-migration and out-migration which had the peak at the age group 25-29, the peak net migration rate for these three regions was in the age group 20-24.

According to the decade migration data for the foreign born, the rate of migration was highest in the age group 25-29. An older peak age for foreign-born than for Canadian-born migrants would be expected, but the deviation from the expected pattern could be explained by the fact that decade migration data for the foreign born used here did not represent internal migration. This point is substantiated by the migration data for 1956-1961, which show that the foreign born had the peak rate in the age group 30-34 and the Canadian born in the age group 25-29.

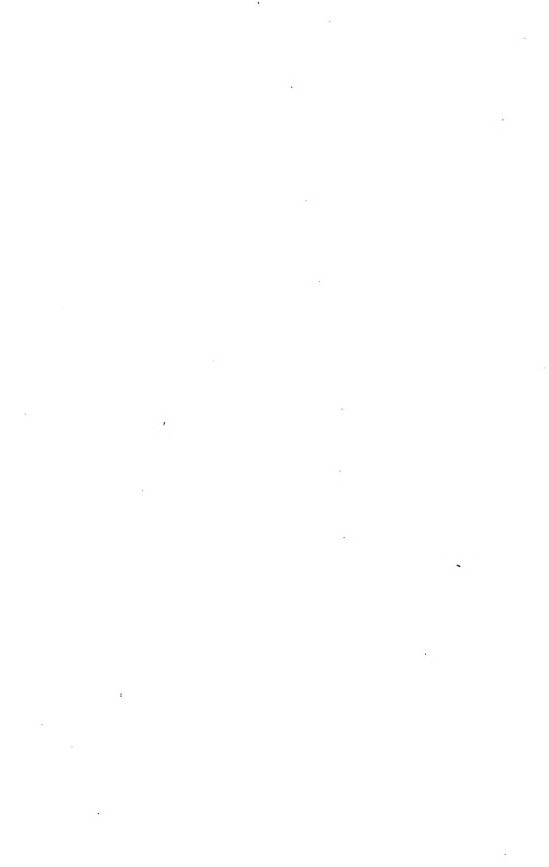
The marital status distributions show that the proportions of married were higher and the proportions of single and widowed were lower among movers than among non-movers for both the sexes. There was very little difference in the marital status distributions of the various types of movers for both sexes. However, substantial variations were observed in the marital status distributions of migrants and non-migrants living in urban, rural non-farm and rural farm areas. Migration data by age and marital status show that the age groups with the highest proportions of single, and married and widowed were 15-19, 35-44 and 65 and over, respectively, for the various types of migration.

#### FOOTNOTES TO CHAPTER SEVEN

<sup>1</sup> This observation is based on the explanation for higher migration rate among males which has been the general pattern in the past. The higher male migration rate is considered to be due to the higher labour force participation rate of males and other economic and social factors (Shryock, 1954, p. 350).

<sup>2</sup> Return migration is older than non-return because a migrant cannot be a return until he has been a non-return migrant. The minor peaks at older ages associated with return migration are a disturbing factor from the point of view of migration prediction because they produce a hollowing in the age curve of gross migration, different from the normal age profile of migration (Eldridge, 1965<sup>3</sup>, p. 455).

<sup>3</sup> Marital status is closely related to age. Hence, the marital status of the most mobile age groups will be reflected in the data. Most of the adult population is married, and married couples generally move together. This is the reason for the higher proportion of married among movers (for similar pattern, see Taeuber, *et al.*, 1968, p. 65).



## ***Chapter Eight***

### ***SUMMARY OF FINDINGS AND CONCLUSIONS***

The main findings of the descriptive part of the study are summarized at the end of each of the substantive chapters. This chapter summarizes and integrates the over-all findings in all the preceding chapters, and draws some general conclusions concerning further investigation of the available migration statistics. The conclusions drawn are rather suggestive and do not strictly emerge from this study because a selective approach was adopted in the analysis of the migration data, taking into consideration the ease of exploitation and the relative importance of the data. No well-defined hypothesis has been tested in this study to arrive at any general conclusions encompassing the whole monograph.

#### **8.1 THE TASK AND THE TOOLS**

As stated in Chapter One this monograph deals with the demographic aspects of internal migration in Canada. Its object is to measure and describe the volume, trends, streams and patterns of migration within Canada, using mainly the estimates of interprovincial migration for the decades 1931-1961 and the detailed statistics on migration from the 1961 Census. The spatial units for the purpose of this study are the provinces (treating the two territories as one province) and the five geographic regions of Canada.

Because it is a volume of the 1961 Census Monograph Series, it seemed appropriate to devote primary attention to the 1961 Census material, but desirable at the same time to examine other data for a historical perspective of migration trends and patterns. For the historical part of the analysis, the place-of-birth and place-of-residence data collected in the censuses from 1931 to 1961 were found to be very useful and one significant contribution of the study is the exploitation in depth of these data for deriving meaningful migration estimates. The use of the place-of-birth data in the past had been mainly confined to the measurement of life-time interprovincial migration but for this study, for the first time, estimates of decade interprovincial net migration for the Canadian-born

population by age and sex, 1931-1941 to 1951-1961, were derived from the province-of-birth by residence data by using the "place-of-birth survival ratio" method. The procedure used yielded intercensal net migration of in-born (mostly net out-migration), out-born (mostly net in-migration) and the net balance of migration by age and sex. Separate estimates of decade interprovincial net migration by age and sex, 1931-1941 to 1951-1961, were made for the foreign-born population using the "census survival ratio" method. Because these two sets of estimates formed the main data for the historical part of the analysis, emphasis was given to the analysis of migration between provinces. Estimates of interprovincial migration for the decades 1931 to 1961 were supplemented by the migration data collected in the 1941 Census.

## **8.2 MIGRATION AS A COMPONENT OF POPULATION GROWTH AND REDISTRIBUTION**

It is notable that the population of Canada has grown at a very uneven pace over the past hundred years and that immigration has played an important role in the observed variations in growth rates. The most rapid growth occurred after 1901, the highest intercensal growth rate being in 1901-1911. Since that phenomenal increase, there were three successive declines in the intercensal growth rates, with the lowest of 10.9 per cent occurring during the depression decade, 1931-1941. An accelerated increase was registered after 1941. Corresponding to the variations in national growth rates, there were substantial variations in the rates among the provinces for the different decades over time, in some degree related to population size, particularly in the early decades. In the later decades, the provincial variations in rates of increase converged mainly as a consequence of the slower growth in the initially most rapidly growing western provinces. Despite their marked drop in the growth rates, the western provinces maintained first place in the growth rates among the provinces during the whole 1901-1961 period.

The distribution of population by province for each census year from 1901 to 1961 showed that Ontario and Quebec had the major share of the total population of Canada and that there had been a westward shift in the population, particularly to British Columbia and Alberta. The Maritime Provinces experienced a steady decline in their share of the total population. The index of population concentration calculated for each census year suggests that concentration of population is high in Canada and that, although the phenomenal change in the growth of population in the western provinces reduced the population concentration between 1901 and 1921, it has since increased steadily.

The fairly close similarity in the pattern of intercensal rate of change of population and the index of population redistribution suggested the

interrelation between national growth and internal redistribution of population. By and large, the same provinces gained or lost population in Canada as a result of redistribution during the whole 1901-1961 period.

Although both natural increase and net migration contributed to the intercensal population change in Canada and the provinces, natural increase was the dominant growth factor since 1901. This was true even in 1951-1961 when net immigration in Canada reached a peak of over one million persons. Because the death rate in Canada is low and has followed a steadily downward trend over the decades, the observed variations in natural increase can be attributed to changes in the birth rate. On the other hand, the interprovincial differences in the population growth for the intercensal periods were mainly caused by differences in the level and direction of migration. Furthermore, migration was the dominant factor in the redistribution of the population of Canada. It may be noted, however, that the interaction effect of migration and natural increase (i.e., the effect of opposite direction of migration and natural increase) cancelled about 33 to 47 per cent of the total redistribution in Canada during 1931-1961.

Separate effects of the migration of Canadian-born and foreign-born population on the over-all population redistribution were also examined. In 1931-1941 and 1941-1951, migration among Canadian born, which is mainly internal, was the more important factor but, during 1951-1961, because of the heavy immigration after World War II, migration of the foreign born became the predominant factor. However, according to the migration data for 1956-1961 which exclude external migration, about 84 per cent of the total redistribution during this period was due to the migration of Canadian born.

### 8.3 LEVELS AND TRENDS IN MIGRATION

— Estimates of life-time migration derived from place-of-birth data showed that the level of interprovincial migration in Canada was lower than the level of interstate migration in the United States but the over-all trend in the proportion of interprovincial migration in Canada since 1901 was upward, indicating that Canadians, in general, have become increasingly more mobile. The total number of internal migrants in Canada (including intramunicipal migrants) between 1956 and 1961 constituted 42.4 per cent of the total population aged five and over in 1961. Of these, 60 per cent were intramunicipal, 32 per cent were intraprovincial and eight per cent were interprovincial migrants.

The estimates of life-time interprovincial migration of the Canadian born for 1901-1961 showed that some provinces that gained through migration in the early years became losing provinces in the later years, and

vice versa. It may also be noted that the number of gaining provinces declined steadily while the number of losing provinces increased. Life-time interprovincial migration was highest in 1911 and lowest in 1941.

The efficiency of interprovincial migration was highest in British Columbia, which suggests that migration to British Columbia was more unidirectional than to other provinces. A comparison between the efficiency of interprovincial migration of the Canadian born and foreign born shows that migration was more efficient for the latter than for the former in redistributing population among the provinces. Further, interprovincial migration was more efficient between non-contiguous than between contiguous provinces.

The pattern of migration revealed by the decade net migration estimates was somewhat similar to the pattern shown by the estimates of life-time migration of the Canadian born for most of the provinces. The most notable difference was in Quebec where the decade net migration showed a gain in 1931-1941. Ontario, British Columbia and the Northwest Territories gained persistently through migration of the Canadian born in all three intercensal periods, while Prince Edward Island, New Brunswick, Manitoba and Saskatchewan lost persistently through migration. Thus, by 1951-1961 net migration gains were concentrated in fewer provinces.

The estimates of intercensal net migration for the foreign born, which included external migration, showed that changes in the amounts of gain or loss at the provincial level followed more or less the same pattern as changes at the national level, indicating that external migration was the major component of the net migration of the foreign born. As in the case of the migration of the Canadian born, Ontario, British Columbia and the Yukon and Northwest Territories gained consistently as a result of foreign-born migration; Ontario had the largest share of the gain in 1941-1951 and 1951-1961. The estimates of decade migration for the Canadian born and foreign born show a relationship between the movements of the two groups. For Canada as a whole, there was an accelerating increase in the net in-migration of the foreign born and a corresponding increase in the net out-migration of the Canadian born in the three decades.

For Canada as a whole, the rates of migration showed an upward trend in net out-migration of the Canadian born and net in-migration of the foreign born (including immigration) during the three decades. Of the two consistently gaining provinces as a result of the migration of the Canadian born and foreign born, the rates were consistently higher for British Columbia than for Ontario.

The direction of interprovincial migration revealed by the 1961 migration data for 1956-1961 was similar to the direction of net migration

for the 1951-1961 decade. The data also indicated a negative association among the provinces between the size of the population, and in- and out-migration rates and turnover rates.

#### 8.4 STREAMS OF MIGRATION

The decade estimates of interprovincial migration showed that, excluding the probable secondary and return migration which was higher in 1931-1941 than in other decades, the origin and destination of Canadian-born migrants have remained essentially the same since 1931. The chief gaining provinces in the decades 1931-1941 to 1951-1961 were Ontario, Quebec, British Columbia and Alberta, and the chief losing provinces were Prince Edward Island, New Brunswick, Manitoba and Saskatchewan. A similar pattern in the direction of migration was observed for the 1956-1961 period. Thus, the provinces of destination were more industrialized and more urbanized, and were characterized by a higher stage of economic development than the provinces from which the migrants came. Such a pattern is quite common because, wherever areas differ from each other, migration tends to follow particular routes and to have a redistributive effect.

The analysis of migration streams by type of residence showed that the dominant stream of migration in Canada was interurban between 1956 and 1961 and that the second dominant stream was to rural non-farm areas. Further, an examination of the origin and destination of migration streams showed that most migrants moved between communities of the same type. The rates and velocities of the nine rural-urban migration streams examined showed that rural farm population was more mobile than urban population and that, although the volume of migration from rural farm areas was small, they continued to be a source of urban growth in Canada during 1956-1961.

#### 8.5 CHARACTERISTICS OF MIGRANTS

The characteristics of migrants examined were sex, age and marital status. The data for the period since 1901 show a tendency for the sex differentials among migrants to narrow over time, which suggests increased migration among females in recent years. The sex ratios of migrants (males per 100 females) varied more or less directly with the distance spanned.

There were no marked differentials between the age patterns of male and female migrants in Canada. A comparison of the age patterns of migrants and non-migrants showed that the age selectivity of migration was in the four five-year age groups, 20 through 39. Thus, migrants tend to be young, and younger than the general population. For Canada as a whole, nearly 50 per cent of all interprovincial migrants between 1956 and 1961 were in the ages 20 to 39 for both sexes. The age-specific migration rates for

1956-1961 exhibited a normal shape for both males and females, with a peak at ages 25 to 29 years and a falling off toward both younger and older age groups. The median ages of migrants at the mid-point of the migration interval for 1956-1961 were 25.2 years for males and 24.1 years for females. The higher migration among the youthful group may be indicative of the lower level of social and economic stability among the younger population than among the older population.

There was very little difference in the age pattern of different types of migrants in Canada for 1956-1961. Also, the age profiles of in-migrants and out-migrants were similar for both males and females.

In the case of internal migration, it would be normal to expect an older peak age for the foreign born than for the native born because internal migration of the foreign born necessarily represents at least the second move. That the intercensal migration estimates for 1931-1961 did not show an older peak age for the foreign born may be attributed to the fact that decade migration estimates for the foreign born did not properly represent internal migration. The data for 1956-1961 provided internal migration alone of the foreign born which showed that the peak rate for the Canadian born was in the age group 25-29 while the peak rate for the foreign born was in the age group 30-34.

The pattern of rural-urban migration for 1956-1961 showed that most of the female migration was interurban. Males were preponderant in all the migration streams to rural farm areas. The observed sex pattern of migrants in the rural and urban areas may be ascribed to the difference in the sex ratio of employment in the urban and rural areas. The rates of the migration streams by age showed that the rates were highest for migrants to urban areas whether they came from other urban areas or from rural areas.

Among movers, the proportions of married were higher and the proportions of single and widowed were lower than among non-movers for both the sexes. There were few differences in the marital status distributions of the various types of movers of both the sexes. However, substantial variations were observed in the marital status distributions of migrants and non-migrants living in urban, rural non-farm and rural farm areas. Migration data by age and marital status showed that the age groups with the highest proportions of single, married and widowed were 15-19, 35-44 and 65 and over, respectively, for the various types of migration examined.

## 8.6 CONCLUDING REMARKS

The study has many limitations and leaves several questions about migration unanswered. The limitations are due to the inability to use much

of the migration data collected and tabulated in the 1961 Census, the lack of required data for certain specific analyses, and the time limit for the completion of the study. One important aspect that needs further exploration is the effect of internal migration—demographic, economic and social—on the sending areas and receiving areas. In analysing the effects of migration on population growth and redistribution in Chapter Four, the indirect demographic effects of migration, which were probably greater than the direct effects, were not considered. Another possibly fruitful approach would be a regression analysis of the factors affecting the propensity to move by comparing areas of net in-migration with those of netout-migration. Some of these areas for further research fall within the scope of the first volume of the monograph on internal migration (Stone, 1969).

Paucity of adequate data for a historical analysis of migration was a handicap at the time work on the present study was started. This handicap necessitated the adoption of a more exploratory approach to prepare interprovincial estimates of net migration by age and sex from place-of-birth statistics for the decades 1931 to 1961. Despite their limitations, the estimates of decade net migration for the Canadian born and foreign born obtained in the study are a useful source for further analytically oriented explorations. As noted earlier, the present study has utilized only a small portion of the available 1961 migration data, of which most are in unpublished form and are available from the Census Division of the Dominion Bureau of Statistics. Of these, a promising source of data for further analysis is the detailed information on intraprovincial migration for each province (i.e., migration between municipalities of each province). The analysis of intraprovincial migration has special importance in Canada because of the immense average areal size of the provinces and the consequent low level of interprovincial migration. As noted earlier, the predominant internal migration in Canada is caused by intraprovincial migration which affects the population size and growth of several counties made up of incorporated cities, towns and villages and rural townships. Supplementary sources of data, which were not used in the present study but could be exploited for obtaining more recent information on migration, are certain administration records, such as those of family allowances and hospital insurance; the family allowance records are currently used by the Dominion Bureau of Statistics for estimating interprovincial migration (also see Kasahara, 1963) and these estimates are used for the post-censal estimates of provincial population. Unlike the other sources of data, the administration records would provide estimates of annual flow of interprovincial migration which are vital for short-term population estimates of the provinces.



***Appendix A***  
***Reference Tables***

Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931- 1941, 1941- 1951 and 1951- 1961

Province and age in 1941	Net migration of in-born	Net migration of out-born by province of birth										All prov- inces	Net balance of migration
		P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.		
1931- 1941													
Prince Edward Island	No.		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Males -													
10-14 .....	- 45		11	13	6	6	2	3	4	1	-	46	- 1
15-19 .....	- 63		9	- 10	3	1	- 1	11	4	2	-	19	- 44
20-24 .....	- 230		12	- 2	7	8	- 3	12	3	- 2	-	35	- 195
25-29 .....	- 430		7	16	5	18	6	3	4	1	-	60	- 370
30-34 .....	- 192		5	- 7	12	9	-	1	-	4	-	38	- 154
35-39 .....	- 180		- 7	- 3	- 1	2	1	1	- 1	-	-	8	- 188
40-44 .....	- 119		- 22	- 5	4	6	-	-	-	-	-	17	- 136
45-49 .....	- 132		2	- 1	-	4	-	-	-	2	-	7	- 125
50-54 .....	- 53		- 19	3	- 2	-	-	-	- 1	-	-	19	- 72
55-59 .....	105		2	- 3	-	-	-	-	-	-	-	1	104
60-64 .....	49		- 4	-	- 1	2	- 1	-	-	-	-	4	45
65-69 .....	62		14	2	2	- 2	1	-	-	-	-	17	79
70+ .....	171		3	5	-	1	-	-	-	-	-	9	180
Totals, males, 10+ ..	- 1,057		13	22	35	55	5	31	13	8	-	182	- 875
Females -													
10-14 .....	- 74		10	4	3	3	-	9	3	6	-	38	- 36
15-19 .....	- 223		2	4	11	7	-	- 4	1	4	-	25	- 198
20-24 .....	- 635		8	4	9	8	2	- 7	6	- 1	-	29	- 606
25-29 .....	- 497		44	31	1	19	1	-	1	- 1	-	96	- 401
30-34 .....	- 184		19	9	- 1	8	9	1	2	- 1	-	46	- 138
35-39 .....	- 191		9	- 9	2	1	3	-	-	1	-	7	- 184
40-44 .....	- 93		- 13	- 2	- 5	3	1	1	-	3	-	12	- 105
45-49 .....	- 66		- 5	- 3	- 3	- 8	1	1	- 1	1	-	17	- 83
50-54 .....	- 51		- 12	- 4	- 2	- 1	-	-	-	-	-	19	- 70
55-59 .....	116		- 4	5	3	5	-	-	-	-	-	1	115
60-64 .....	63		- 6	- 1	- 1	- 1	-	-	-	-	-	9	54
65-69 .....	59		- 3	- 5	-	1	-	-	-	-	-	7	52
70+ .....	165		2	3	- 2	- 4	-	-	-	-	-	1	164
Totals, females, 10+ ..	- 1,611		51	36	15	31	17	1	12	12	-	175	- 1,436

1931-1941

## Nova Scotia

## Males -

10-14.....	- 206	18		77	74	72	30	53	22	15	-	361	155
15-19.....	- 13	50		136	62	49	25	27	27	11	-	387	400
20-24.....	- 456	146		241	138	246	53	60	59	23	2	968	512
25-29.....	- 1,049	162		271	113	318	76	61	58	44	-	1,103	54
30-34.....	- 357	95		178	64	120	36	28	12	20	1	554	197
35-39.....	- 614	53		91	28	73	15	9	3	7	1	280	- 334
40-44.....	- 515	- 5		- 54	- 2	29	11	-	3	- 3	-	87	- 428
45-49.....	- 558	- 9		- 41	- 2	16	4	1	2	6	1	- 22	- 580
50-54.....	- 455	5		15	1	24	3	1	-	-	-	49	- 406
55-59.....	537	- 6		23	7	5	-	-	1	- 2	-	28	565
60-64.....	379	14		15	2	- 6	- 1	-	-	1	-	25	404
65-69.....	384	14		30	4	4	-	-	-	-	-	52	436
70+.....	1,012	12		40	8	- 3	2	-	-	1	-	60	1,072

## Totals, males, 10+ ..

- 1,885	549		1,130	497	947	254	240	187	123	5	3,932	2,047
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## Females -

10-14.....	- 435	31		127	71	77	20	53	22	11	-	412	- 23
15-19.....	- 426	89		163	62	63	33	44	24	7	-	485	- 59
20-24.....	- 1,185	171		301	142	195	76	75	45	40	-	1,045	- 140
25-29.....	- 1,440	111		202	116	181	89	51	64	36	-	850	- 590
30-34.....	- 596	52		188	92	93	43	40	17	14	-	539	- 57
35-39.....	- 885	15		93	19	56	21	6	3	1	-	214	- 671
40-44.....	- 714	21		49	5	25	14	2	7	13	-	136	- 578
45-49.....	- 549	- 12		9	5	8	2	-	3	- 1	- 1	71	- 497
50-54.....	- 568	4		51	15	3	-	1	-	1	-	97	715
55-59.....	618	5		56	12	21	1	-	-	- 1	-	34	465
60-64.....	431	11		21	2	1	-	-	-	-	-	50	314
65-69.....	264	3		33	6	7	-	-	1	-	-	52	436
70+.....	1,112	17		80	19	7	1	-	-	1	1	126	1,238

## Totals, females, 10+ ..

- 4,373	518		1,373	566	737	300	274	186	124	- 1	4,077	- 296
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Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931-1941, 1941-1951 and 1951-1961 - continued

Province and age in 1941	Net migration of in-born	Net migration of out-born by province of birth										All provinces	Net balance of migration
		P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.		
		1931- 1941											
New Brunswick	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.	No.
Males -													
10-14 .....	- 414	25	58		56	43	11	19	17	7	1	237	- 177
15-19 .....	- 335	47	85		14	20	6	7	-	7	-	158	- 177
20-24 .....	- 788	60	161		31	23	17	23	4	5	-	324	- 464
25-29 .....	- 1,288	72	133		6	81	13	25	3	14	-	347	- 941
30-34 .....	- 601	69	92		45	69	5	18	6	5	1	220	- 381
35-39 .....	- 546	15	42		26	35	9	5	1	5	1	87	- 459
40-44 .....	- 450	25	- 1		71	8	1	1	-	3	1	- 33	- 483
45-49 .....	- 294	2	- 1		40	5	3	1	2	-	-	- 28	- 322
50-54 .....	- 268	- 16	- 13		50	- 2	2	2	- 1	1	-	- 77	- 345
55-59 .....	541	13	- 8		22	9	- 1	-	-	4	-	- 5	536
60-64 .....	359	- 10	- 5		24	- 7	1	-	-	- 2	-	- 47	312
65-69 .....	294	- 10	7		27	-	1	-	-	1	-	26	320
70+ .....	798	5	22		9	8	-	-	-	-	-	44	842
Totals, males, 10+ ..	- 2,992	297	572		- 163	292	68	101	32	50	4	1,253	- 1,739
Females -													
10-14 .....	- 580	7	67		89	49	4	22	10	5	-	253	- 327
15-19 .....	- 802	46	110		46	33	11	15	1	- 2	-	260	- 542
20-24 .....	- 1,850	86	234		60	64	16	22	3	9	-	494	- 1,356
25-29 .....	- 1,859	80	223		12	114	28	14	13	10	-	470	- 1,385
30-34 .....	- 754	22	102		60	59	15	2	6	2	-	148	- 606
35-39 .....	- 715	- 20	2		73	31	3	6	- 2	3	-	- 10	- 725
40-44 .....	- 549	3	22		35	14	2	- 1	1	-	-	-	- 549
45-49 .....	- 372	- 2	- 7		56	- 12	- 1	1	1	1	-	- 75	- 447
50-54 .....	- 353	- 5	- 51		3	1	3	1	- 1	-	-	- 55	- 408
55-59 .....	523	- 1	27		15	6	-	1	1	-	-	49	572
60-64 .....	404	6	6		16	1	-	-	-	-	-	- 3	401
65-69 .....	231	13	- 7		25	2	- 1	-	-	1	-	33	264
70+ .....	788	9	20		15	4	-	1	-	2	-	51	839
Totals, females, 10+	- 5,888	278	748		- 5	366	80	84	33	31	-	1,615	- 4,273

## Quebec

## Males -

	No.	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.
10-14 .....	- 1,783	10	41	214		548	87	115	66	43	8	1,132	- 651
15-19 .....	- 747	13	83	284		688	65	123	82	31	13	1,382	635
20-24 .....	- 1,619	40	264	459		1,440	190	219	132	60	7	2,811	1,192
25-29 .....	- 2,217	70	356	563		1,882	267	268	173	94	6	3,679	1,462
30-34 .....	- 664	48	205	325		1,370	152	157	65	46	8	2,376	1,712
35-39 .....	- 1,357	17	83	138		482	78	9	22	4	4	837	- 520
40-44 .....	- 1,436	13	39	22		110	35	7	4	- 5	2	227	- 1,209
45-49 .....	- 842	16	8	- 5		- 93	29	5	- 4	- 5	7	164	- 678
50-54 .....	- 878	5	13	- 46		- 18	- 7	6	- 5	- 5	1	- 56	- 934
55-59 .....	4,141	6	8	20		141	13	3	- 2	- 1	1	191	- 4,332
60-64 .....	2,818	9	12	- 21		6	2	3	- 1	- 1	1	10	2,828
65-69 .....	1,623	-	- 8	- 20		14	- 1	3	5	2	2	- 3	1,620
70+ .....	5,324	- 2	10	25		70	1	2	3	2	1	112	5,436

## Totals, males, 10+ ..

2,363	245	1,114	1,968		6,826	911	919	541	277	61	12,862	15,225
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## Females -

10-14 .....	- 2,314	13	67	206		600	70	136	86	29	10	1,217	- 1,097
15-19 .....	- 1,795	71	125	487		926	94	164	67	30	13	1,977	1,182
20-24 .....	- 2,360	236	488	1,163		1,833	207	291	138	66	3	4,425	2,065
25-29 .....	- 2,872	170	474	987		1,906	305	221	128	78	5	4,274	1,402
30-34 .....	- 1,434	42	186	299		1,088	128	105	51	41	3	1,943	509
35-39 .....	- 2,588	22	24	123		341	56	24	10	5	6	611	- 1,977
40-44 .....	- 1,961	8	3	85		103	14	13	6	- 2	4	234	- 1,727
45-49 .....	- 1,153	19	4	8		70	35	2	- 1	- 8	3	132	- 1,021
50-54 .....	- 1,303	6	- 31	8		96	2	- 3	1	- 4	1	76	- 1,227
55-59 .....	4,173	1	31	35		229	23	3	- 2	5	2	327	4,500
60-64 .....	2,978	20	30	28		116	11	-	-	-	1	206	3,184
65-69 .....	1,687	4	23	13		2	3	4	1	2	1	53	1,740
70+ .....	4,879	4	43	65		154	3	2	-	-	3	274	5,153

## Totals, females, 10+ ..

- 4,063	616	1,467	3,507		7,464	951	962	485	242	55	15,749	11,686
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Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931- 1941, 1941- 1951 and 1951- 1961 - continued

Province and age in 1941	Net migration of in-born	Net migration of out-born by province of birth										All provinces	Net balance of migration		
		P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.				
		1931- 1941													
Ontario	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.		
Males -															
10- 14 .....	- 1,054	7	73	82	1,268		694	1,238	343	132	1	3,838	2,784		
15- 19 .....	643	24	120	108	1,002		930	1,412	342	98	5	4,041	4,684		
20- 24 .....	- 68	82	398	317	1,883		2,215	2,600	741	262	2	8,500	8,432		
25- 29 .....	- 2,142	147	586	432	2,294		2,984	2,967	755	361	4	10,530	8,388		
30- 34 .....	- 648	66	428	319	1,493		1,688	1,334	352	191	2	5,873	6,521		
35- 39 .....	- 2,237	50	151	126	673		745	385	83	35	- 2	2,246	9		
40- 44 .....	- 2,096	37	48	102	435		289	70	-	11	3	995	- 1,101		
45- 49 .....	- 1,940	15	64	43	202		177	37	9	- 16	- 1	530	- 1,410		
50- 54 .....	- 1,718	14	14	19	18		113	30	- 3	16	4	225	- 1,493		
55- 59 .....	3,579	4	37	48	276		70	28	10	1	- 1	473	4,052		
60- 64 .....	2,276	15	- 13	42	84		4	18	7	- 2	-	155	2,431		
65- 69 .....	1,338	- 6	- 4	10	100		8	6	1	4	1	120	1,458		
70+ .....	5,348	8	29	39	352		19	11	5	3	2	468	5,816		
Totals, males, 10+ ..	2,577	463	1,931	1,687	10,080		9,936	10,136	2,645	1,096	20	37,994	40,571		
Females -															
10- 14 .....	- 2,156	- 1	103	91	1,300		684	1,231	353	112	6	3,879	1,723		
15- 19 .....	- 1,414	26	130	112	1,252		856	1,289	253	133	6	4,057	2,643		
20- 24 .....	- 2,155	159	429	369	1,887		2,398	2,967	680	268	- 1	9,156	7,001		
25- 29 .....	- 3,237	114	455	443	2,029		2,656	2,629	674	279	1	9,280	6,043		
30- 34 .....	- 702	70	257	251	1,320		1,411	1,022	220	145	4	4,700	3,998		
35- 39 .....	- 3,934	39	111	108	603		477	252	98	41	2	1,731	2,203		
40- 44 .....	- 3,275	16	50	65	354		220	24	10	14	- 1	752	- 2,523		
45- 49 .....	- 2,467	- 2	15	47	222		103	50	17	- 4	1	449	- 2,018		
50- 54 .....	- 2,468	- 3	21	36	- 10		40	23	- 14	6	- 1	98	- 2,370		
55- 59 .....	4,497	9	45	22	269		98	27	9	- 2	3	480	4,977		
60- 64 .....	3,167	6	24	40	184		30	5	4	- 1	2	296	3,463		
65- 69 .....	1,934	9	20	19	151		1	8	-	-	- 1	207	2,141		
70+ .....	6,471	17	42	34	235		24	5	-	7	2	366	6,837		
Totals, females, 10+ ..	- 5,739	459	1,702	1,637	9,796		8,998	9,532	2,304	1,000	23	35,451	29,712		

1931-1941												
Manitoba												
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Males -												
10-14 .....	- 1,531	-	4	3	19	55	903	80	12	- 4	1,072	- 459
15-19 .....	- 1,323	-	1	3	16	- 3	699	20	15	- 2	747	- 576
20-24 .....	- 3,088	- 3	13	7	33	126	839	110	36	- 3	1,158	- 1,930
25-29 .....	- 4,364	6	23	11	54	155	775	114	22	- 1	1,159	- 3,205
30-34 .....	- 2,115	2	8	7	61	- 65	341	45	5	- 10	394	- 1,721
35-39 .....	- 1,200	9	- 22	- 13	6	- 255	103	14	- 13	- 1	- 172	- 1,372
40-44 .....	- 768	-	7	- 5	- 38	- 214	17	- 5	- 20	-	- 272	- 1,040
45-49 .....	- 471	- 24	- 31	- 5	- 12	- 212	- 4	- 10	- 3	- 3	- 250	- 721
50-54 .....	- 428	- 12	- 22	- 8	- 49	- 275	- 8	- 1	- 8	- 1	- 384	- 812
55-59 .....	266	12	3	- 8	26	11	20	- 2	-	1	63	329
60-64 .....	182	6	19	- 3	37	- 3	11	1	- 5	-	69	251
65-69 .....	131	3	- 20	- 10	24	- 57	- 5	-	2	- 1	- 52	79
70+ .....	278	5	4	9	102	339	- 1	3	-	-	461	739
Totals, males, 10+ ..	- 14,431	52	- 29	- 6	279	- 398	3,700	369	43	- 17	3,993	- 10,438
Females -												
10-14 .....	- 1,805	-	- 2	- 3	17	58	821	98	33	-	1,022	- 783
15-19 .....	- 1,585	1	-	6	- 9	32	934	51	19	- 4	1,030	- 555
20-24 .....	- 3,638	3	-	3	34	78	1,688	96	46	- 2	1,946	- 1,692
25-29 .....	- 4,678	3	8	7	33	18	1,125	113	26	-	1,333	- 3,345
30-34 .....	- 2,240	2	-	-	12	- 34	355	27	11	- 6	385	- 1,855
35-39 .....	- 1,287	-	- 17	- 7	- 23	- 143	16	- 1	-	- 2	- 177	- 1,464
40-44 .....	- 724	- 12	- 15	- 8	- 43	- 227	1	- 20	- 14	- 1	- 339	- 1,063
45-49 .....	- 554	- 5	- 15	- 5	- 52	- 306	- 55	- 14	- 7	-	- 459	- 1,013
50-54 .....	- 393	- 9	- 13	- 9	- 37	- 361	- 20	- 18	- 7	- 2	- 487	- 880
55-59 .....	271	12	8	6	23	55	40	3	- 2	2	37	308
60-64 .....	160	- 1	- 1	- 15	4	- 61	- 4	1	-	1	- 76	84
65-69 .....	86	4	4	1	- 10	- 79	3	- 1	-	- 1	- 79	7
70+ .....	256	8	11	2	62	407	1	7	1	- 1	498	754
Totals, females, 10+ ..	- 16,131	6	- 23	- 13	11	- 673	4,905	342	95	- 16	4,634	- 11,497

Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931-1941, 1941-1951 and 1951-1961 - continued

Province and age in 1941	Net migration of in-born	Net migration of out-born by province of birth										All prov- inces	Net balance of migration
		P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.		
1931-1941													
Saskatchewan	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.
Males -													
10-14 .....	- 5,174	- 4	- 3	- 1	- 1	- 52	- 49		- 10	4	2	- 114	- 5,288
15-19 .....	- 4,644	- 2	- 24	- 2	- 12	- 117	- 210		- 109	- 25	2	- 495	- 5,139
20-24 .....	- 6,806	-	- 12	- 3	- 4	- 84	- 134		23	6	3	- 205	- 7,011
25-29 .....	- 7,669	- 9	- 6	13	- 51	- 324	- 318		- 86	- 6	4	- 783	- 8,452
30-34 .....	- 3,109	- 22	- 71	- 30	- 177	- 869	- 508		- 102	- 34	3	- 1,810	- 4,919
35-39 .....	- 1,454	- 35	- 134	- 46	- 200	- 1,162	- 745		- 94	- 29	1	- 2,444	- 3,898
40-44 .....	- 620	- 45	- 69	- 39	- 188	- 1,060	- 418		- 46	- 20	5	- 1,880	- 2,500
45-49 .....	- 329	- 41	- 72	- 39	- 179	- 1,147	- 384		- 29	- 18	1	- 1,908	- 2,237
50-54 .....	- 190	- 23	- 94	- 24	- 139	- 1,201	- 294		- 13	- 8	4	- 1,792	- 1,982
55-59 .....	143	- 27	- 23	- 18	1	- 397	16		6	- 7	3	- 460	- 317
60-64 .....	97	27	- 17	- 9	-	- 266	1		7	- 2	3	- 241	- 144
65-69 .....	56	4	- 23	- 3	12	- 242	3		5	- 2	- 2	- 248	- 192
70+ .....	190	4	30	14	89	343	68		2	1	1	552	742
Totals, males, 10+..	- 29,509	-173	- 518	- 183	- 849	- 6,578	- 2,972		- 446	- 140	31	- 11,828	- 41,337
Females -													
10-14 .....	- 5,302	-	- 7	- 2	- 17	- 46	5		- 7	7	1	- 66	- 5,368
15-19 .....	- 5,339	- 5	- 8	- 5	- 22	- 143	- 257		- 85	- 28	-	- 553	- 5,892
20-24 .....	- 9,618	- 3	- 16	- 1	- 23	- 162	- 255		- 104	- 18	-	- 582	- 10,200
25-29 .....	- 8,553	- 4	- 10	- 8	- 78	- 293	- 106		60	- 14	-	- 437	- 8,990
30-34 .....	- 3,147	- 3	- 29	4	- 79	- 571	- 433		21	- 33	5	- 1,118	- 4,265
35-39 .....	- 1,354	- 17	- 55	- 33	- 84	- 829	- 591		- 73	- 26	- 4	- 1,712	- 3,066
40-44 .....	- 599	- 36	- 83	- 45	- 106	- 814	- 470		- 25	- 26	- 1	- 1,606	- 2,205
45-49 .....	- 296	- 31	- 64	- 36	- 106	- 894	- 382		- 32	- 20	1	- 1,564	- 1,860
50-54 .....	- 156	- 15	- 33	- 27	- 102	- 881	- 298		- 17	- 9	2	- 1,380	- 1,536
55-59 .....	153	6	- 16	- 5	- 25	- 295	17		8	- 2	4	- 308	- 155
60-64 .....	71	- 9	- 2	6	- 13	- 270	29		- 3	- 2	- 1	- 265	- 194
65-69 .....	51	-	3	- 12	- 24	- 120	1		8	-	- 1	- 145	- 94
70+ .....	150	10	2	5	49	151	40		7	1	1	266	416
Totals, female, 10+ .	- 33,939	- 107	- 318	- 143	- 630	- 5,167	- 2,700		- 242	- 170	7	- 9,470	- 43,409

## Alberta

## Males -

	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
10-14 .....	- 1,989	- 2	6	- 2	- 4	-	59	794	24	2	877	- 1,112
15-19 .....	- 1,331	1	- 5	- 8	- 32	15	81	710	12	- 5	779	- 552
20-24 .....	- 2,225	3	10	- 8	- 16	64	210	1,110	- 1	- 2	1,418	- 807
25-29 .....	- 2,550	16	14	15	- 7	82	287	1,103	6	- 1	1,515	- 1,035
30-34 .....	- 1,026	- 5	- 10	- 2	- 37	- 114	149	405	- 22	- 2	362	- 664
35-39 .....	- 911	- 21	- 59	- 11	- 112	- 268	- 15	63	- 61	- 8	- 492	- 1,403
40-44 .....	- 529	- 10	- 55	- 23	- 85	- 257	- 48	6	- 26	1	- 497	- 1,026
45-49 .....	- 321	- 17	- 64	- 35	- 64	- 262	- 41	- 9	- 35	- 1	- 528	- 849
50-54 .....	- 217	- 13	- 74	- 7	- 63	- 387	- 20	- 5	- 28	3	- 594	- 811
55-59 .....	65	18	11	4	64	98	39	32	- 4	1	263	328
60-64 .....	49	- 13	18	- 16	55	72	2	9	2	- 3	126	175
65-69 .....	14	16	- 3	9	42	- 80	6	9	- 4	-	- 5	9
70+ .....	131	17	6	27	123	330	19	13	4	-	539	670

## Totals, males, 10+..

- 10,840	- 10	- 205	- 41	- 104	- 707	728	4,240	- 133	- 5	3,763	- 7,077
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## Females -

10-14 .....	- 2,278	1	- 9	2	- 20	14	116	735	20	11	870	- 1,408
15-19 .....	- 1,775	1	- 15	- 1	- 41	9	101	721	- 40	7	742	- 1,033
20-24 .....	- 2,960	- 4	15	- 1	- 34	14	232	1,397	63	2	1,684	- 1,276
25-29 .....	- 3,406	4	1	9	- 2	- 11	291	1,173	- 13	1	1,453	- 1,953
30-34 .....	- 1,334	- 4	- 25	- 3	- 21	- 197	103	404	- 27	- 1	229	- 1,105
35-39 .....	- 984	4	- 33	- 8	- 22	- 291	- 10	14	- 89	- 3	- 438	- 1,422
40-44 .....	- 611	- 2	- 51	- 28	- 82	- 292	- 70	- 23	- 40	-	- 588	- 1,199
45-49 .....	- 306	- 2	- 85	- 22	- 48	- 326	- 32	- 16	- 15	-	- 542	- 848
50-54 .....	- 184	- 22	- 46	- 34	- 49	- 382	- 34	5	- 23	1	- 584	- 768
55-59 .....	40	9	- 36	8	17	15	59	16	4	4	168	208
60-64 .....	28	10	- 16	- 4	39	- 39	11	15	- 1	3	22	50
65-69 .....	9	3	8	-	9	- 6	13	4	4	- 1	38	47
70+ .....	139	15	9	26	63	192	19	8	4	4	340	479

## Totals, females, 10+.

- 13,622	17	- 211	- 48	- 191	- 1,300	799	4,453	- 153	28	3,394	- 10,228
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Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931-1941, 1941-1951 and 1951-1961 - continued

Province and age in 1941	Net migration of in-born	Net migration of out-born by province of birth										All provinces	Net balance of migration
		P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.		
1931-1941													
British Columbia	No.	No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.
Males -													
10-14 .....	- 347	- 2	15	5	46	207	636	2,019	1,372		13	4,311	3,964
15-19 .....	- 81	- 1	10	5	52	167	676	2,064	1,106		13	4,094	4,013
20-24 .....	- 258	- 1	37	29	80	298	902	2,481	1,348		8	5,182	4,924
25-29 .....	- 713	- 7	85	58	155	520	1,100	2,626	1,411		- 4	5,958	5,245
30-34 .....	- 310	23	72	60	121	522	822	1,369	709		- 2	3,696	3,386
35-39 .....	- 856	15	14	31	75	137	446	350	188		- 4	1,252	396
40-44 .....	- 712	- 8	2	18	109	269	294	161	20		1	866	154
45-49 .....	- 652	25	36	24	114	146	156	35	4		- 5	545	- 107
50-54 .....	- 546	-	- 4	10	44	159	79	23	- 5		- 2	304	- 242
55-59 .....	41	30	53	51	95	472	132	54	19		5	911	952
60-64 .....	- 8	26	65	53	61	387	70	15	9		1	687	679
65-69 .....	- 31	- 17	- 14	30	106	530	24	7	7		-	673	642
70+ .....	245	43	146	85	155	960	14	14	12		4	1,433	1,678
Totals, males, 10+ ..	- 4,228	142	517	459	1,213	4,774	5,351	11,218	6,200		38	29,912	25,684
Females -													
10-14 .....	- 537	- 2	8	12	41	196	649	2,036	1,435		10	4,385	3,848
15-19 .....	- 421	- 1	26	8	45	157	640	2,146	1,250		10	4,281	3,860
20-24 .....	- 711	6	45	15	68	225	931	3,229	1,923		8	6,450	5,739
25-29 .....	- 904	4	74	39	132	368	1,155	3,117	1,954		16	6,859	5,955
30-34 .....	- 714	-	64	22	126	375	818	1,347	682		- 7	3,427	2,713
35-39 .....	- 1,052	- 1	30	31	79	261	407	345	62		- 2	1,212	160
40-44 .....	- 910	- 2	14	28	67	194	222	163	39		6	731	- 179
45-49 .....	- 763	5	26	13	24	176	188	64	- 15		- 3	478	- 285
50-54 .....	- 555	6	17	2	39	197	104	38	22		1	426	- 129
55-59 .....	76	33	47	58	82	463	186	67	26		- 1	961	1,037
60-64 .....	6	20	95	39	94	618	82	21	17		3	989	995
65-69 .....	2	-	52	47	61	415	19	11	9		5	619	621
70+ .....	226	19	118	77	140	831	31	11	14		3	1,244	1,470
Totals, females, 10+ .	- 6,257	87	616	391	998	4,476	5,432	12,595	7,418		49	32,062	25,805

Yukon and Northwest  
Territories

## Males -

10-14	- 26	-	-	-	- 47	4	- 3	4	38	9		5	- 21
15-19	- 39	-	1	-	- 59	2	8	19	51	3		25	- 14
20-24	- 15	-	6	-	- 35	19	12	22	120	60		204	189
25-29	- 11	-	8	1	- 16	52	35	65	114	76		335	324
30-34	- 14	-	- 4	5	- 14	39	20	19	66	40		171	185
35-39	- 6	1	- 7	- 2	- 4	25	9	18	26	7		67	61
40-44	- 47	1	- 7	4	- 27	7	5	7	15	- 3		2	- 45
45-49	- 48	4	3	1	- 14	22	5	2	20	- 1		42	- 6
50-54	- 46	- 1	4	4	- 12	10	3	4	8	1		21	- 25
55-59	- 19	2	2	1	- 7	1	-	2	- 3	1		- 1	- 20
60-64	-	1	- 2	1	-	3	- 3	3	5	3		17	17
65-69	1	- 1	- 4	1	- 4	3	- 2	1	2	2		- 2	1
70+	10	1	3	-	- 6	2	-	1	3	1		5	15

Totals, males, 10+ ..

- 232      8      17      16      - 265      189      95      167      465      199           891      659

## Females -

10-14	- 45	- 3	1	-	- 53	1	5	- 2	31	16		3	- 42
15-19	- 38	-	-	-	- 63	- 2	- 3	- 1	59	4		- 6	- 44
20-24	- 14	-	-	-	- 45	1	2	14	66	15		53	39
25-29	- 33	-	-	-	- 5	22	9	30	62	48		164	131
30-34	- 1	-	-	-	- 20	16	7	13	39	16		73	74
35-39	- 28	-	1	-	- 30	7	4	2	12	13		7	- 21
40-44	- 37	-	3	- 3	- 21	- 2	1	2	6	- 6		- 20	- 57
45-49	- 33	-	-	-	- 15	2	- 1	1	1	- 4		- 17	- 50
50-54	- 36	-	2	-	- 10	1	1	- 1	3	- 2		- 6	- 42
55-59	- 12	-	-	-	- 5	3	1	-	4	2		- 5	- 7
60-64	- 9	1	-	-	- 7	- 3	- 1	-	-	1		- 9	-
65-69	- 1	-	- 1	- 2	- 12	- 3	-	-	3	-		- 15	- 16
70+	17	-	-	1	- 6	- 4	-	-	1	-		- 8	9

Totals, females, 10+ ..

- 250      1      4      - 4      - 292      39      25      61      287      103           224      - 26

Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931-1941, 1941-1951 and 1951-1961 - continued

Province and age in 1951	Net migration of in-born	Net migration of out-born by province of birth										All prov- inces	Net balance of migration
		P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.		
		1941-1951											
Prince Edward Island	No.		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Males -													
10-14 .....	- 333		44	15	11	16	-	3	1	1	-	91	- 242
15-19 .....	- 617		30	16	8	16	10	10	5	4	-	99	- 518
20-24 .....	- 1,167		64	21	24	68	17	21	22	11	-	248	- 919
25-29 .....	- 1,186		65	51	22	67	11	19	12	6	1	254	- 932
30-34 .....	- 955		32	22	9	38	11	13	12	- 1	-	136	- 819
35-39 .....	- 629		25	7	-	14	6	6	- 5	3	-	56	- 573
40-44 .....	- 271		-	17	- 12	- 2	- 4	- 1	3	- 2	-	- 1	- 272
45-49 .....	- 38		5	4	4	- 1	-	-	1	-	-	13	- 25
50-54 .....	- 27		2	4	- 1	- 6	-	-	-	-	-	- 1	- 28
55-59 .....	71		- 1	- 1	- 2	- 4	-	-	-	- 1	-	- 9	62
60-64 .....	86		14	-	-	-	-	-	-	-	-	14	100
65-69 .....	22		- 6	5	- 2	- 1	- 1	-	1	-	-	- 4	18
70+ .....	- 121		- 9	-	- 2	-	- 1	-	-	-	-	- 12	- 133
Totals, males, 10+ ..	- 5,165		265	161	59	205	49	71	52	21	1	884	- 4,281
Females -													
10-14 .....	- 310		32	9	3	19	2	1	1	3	-	70	- 240
15-19 .....	- 562		15	16	4	- 7	2	4	- 1	-	-	33	- 529
20-24 .....	- 1,184		41	44	14	30	3	5	5	1	-	143	- 1,041
25-29 .....	- 1,342		107	45	8	53	6	27	1	4	-	251	- 1,091
30-34 .....	- 750		38	33	9	29	4	13	3	1	-	130	- 620
35-39 .....	- 510		13	7	- 3	- 7	4	5	- 2	8	-	25	- 485
40-44 .....	- 151		- 6	10	- 1	-	- 1	- 2	- 1	- 1	-	- 2	- 153
45-49 .....	17		8	-	4	2	- 1	2	1	3	-	19	36
50-54 .....	71		8	2	3	- 3	- 1	- 2	- 1	- 1	-	5	76
55-59 .....	82		2	5	- 2	2	-	2	2	- 1	-	10	92
60-64 .....	36		13	2	- 1	- 2	2	-	-	1	-	15	51
65-69 .....	- 2		2	- 7	-	-	-	-	-	-	-	- 5	- 7
70+ .....	- 218		- 4	1	- 3	3	-	-	-	-	-	- 3	- 221
Totals, females, 10+ ..	- 4,823		269	167	35	119	20	55	8	18	-	691	- 4,132

1941 - 1951												
Nova Scotia												
Males -												
No.		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
10-14	- 1,493	108	242	38	37	- 24	- 3	- 5	- 12	-	381	- 1,112
15-19	- 2,871	112	237	185	678	43	117	96	65	-	1,535	- 1,336
20-24	- 5,455	153	388	442	1,313	115	191	153	123	-	2,878	- 2,577
25-29	- 5,645	180	371	242	690	124	165	115	107	-	1,996	- 3,649
30-34	- 4,489	119	255	81	197	63	121	54	76	- 2	964	- 3,525
35-39	- 2,947	65	56	- 5	- 81	- 29	- 1	- 31	10	-	- 16	- 2,963
40-44	- 970	43	63	- 26	- 14	- 13	- 6	- 14	- 5	- 1	27	- 943
45-49	- 3	51	88	-	- 30	- 1	- 3	3	- 4	1	105	102
50-54	480	18	66	6	- 5	- 3	1	- 1	3	-	85	565
55-59	656	23	80	- 2	- 5	- 1	1	- 1	- 1	- 1	93	749
60-64	651	7	47	- 1	- 5	- 3	- 1	1	-	1	46	697
65-69	616	14	67	- 6	5	2	-	1	-	-	81	697
70+	- 629	14	10	- 4	14	- 1	-	-	- 2	1	32	- 597
Totals, males, 10+ ..	- 22,099	907	1,970	950	2,794	272	582	369	360	3	8,207	- 13,892
Females -												
10-14	- 1,440	113	257	47	39	- 12	- 4	- 2	- 9	-	429	- 1,011
15-19	- 1,896	143	312	30	3	- 4	2	- 8	- 1	1	478	- 1,418
20-24	- 4,382	228	374	69	167	28	21	19	33	-	939	- 3,443
25-29	- 6,488	186	447	94	302	39	57	57	43	2	1,227	- 5,261
30-34	- 4,744	80	216	- 3	39	- 38	17	- 2	4	-	313	- 4,431
35-39	- 2,916	69	104	- 25	- 28	- 43	-	- 44	- 7	-	26	- 2,890
40-44	- 823	35	108	- 19	- 17	- 19	- 19	- 12	- 13	-	44	- 779
45-49	232	31	65	- 10	- 6	- 4	- 3	- 1	3	-	79	311
50-54	559	21	65	4	- 6	- 9	-	- 4	-	-	63	622
55-59	558	18	92	1	7	1	1	-	2	-	122	680
60-64	440	5	17	- 2	-	-	1	1	1	-	23	463
65-69	111	16	30	- 5	- 6	- 2	-	- 2	- 1	-	30	141
70+	- 1,275	13	49	6	- 2	-	1	- 2	-	- 1	64	- 1,211
Totals, females, 10+.	- 22,064	958	2,140	187	492	- 63	74	-	47	2	3,837	- 18,227

Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931-1941, 1941-1951 and 1951-1961 - continued

Province and age in 1951	Net migration in-born	Net migration of out-born by province of birth										All provinces	Net balance of migration
		P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.		
1941-1951													
New Brunswick	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.	No.
Males -													
10-14 .....	- 1,334	64	206		181	24	- 1	3	4	1	-	482	- 852
15-19 .....	- 2,370	51	198		138	20	7	-	4	5	-	423	- 1,947
20-24 .....	- 5,139	97	329		112	85	11	16	7	4	- 1	660	- 3,853
25-29 .....	- 4,758	83	399		129	143	26	37	24	14	- 1	854	- 3,904
30-34 .....	- 3,519	88	213		123	89	24	34	25	6	- 1	601	- 2,918
35-39 .....	- 2,232	55	152		28	7	5	7	7	- 1	-	260	- 1,972
40-44 .....	- 781	39	70		70	- 9	- 3	4	- 3	- 7	-	161	- 620
45-49 .....	- 74	16	80		44	- 1	5	- 1	- 2	-	-	141	67
50-54 .....	55	7	5		19	6	- 1	1	- 1	- 1	- 1	34	89
55-59 .....	233	32	63		12	- 10	- 2	-	-	-	-	95	328
60-64 .....	453	29	26		- 7	3	2	-	2	-	-	55	508
65-69 .....	390	4	28		26	- 6	2	-	2	- 3	-	53	443
70+ .....	- 431	- 4	6		- 10	- 3	1	-	-	- 1	-	- 11	- 442
Totals, males, 10+ ..	- 18,881	561	1,775		865	348	76	101	69	17	- 4	3,808	- 15,073
Females -													
10-14 .....	- 1,462	53	229		215	23	- 3	3	4	4	-	528	- 934
15-19 .....	- 1,953	98	271		209	17	- 10	- 1	- 1	- 5	-	578	- 1,375
20-24 .....	- 3,918	198	476		161	65	5	18	5	7	-	934	- 2,984
25-29 .....	- 4,947	132	431		173	140	15	33	25	18	-	967	- 3,980
30-34 .....	- 3,201	69	234		76	60	8	29	13	8	-	497	- 2,704
35-39 .....	- 1,860	31	83		74	- 12	- 10	- 1	-	- 5	1	161	- 1,699
40-44 .....	- 657	34	63		62	- 9	- 4	4	- 1	- 2	-	147	- 510
45-49 .....	- 68	11	45		15	- 5	- 2	1	3	- 2	-	66	- 2
50-54 .....	238	20	33		- 11	- 2	2	- 1	-	-	-	41	279
55-59 .....	260	29	24		10	- 12	2	1	-	- 1	-	53	313
60-64 .....	276	12	36		- 8	9	- 1	- 1	1	1	-	49	325
65-69 .....	21	2	13		- 29	- 10	2	1	- 1	-	-	- 22	- 1
70+ .....	- 930	9	27		- 3	13	-	- 1	1	- 3	-	43	- 887
Totals, females, 10+ .	- 18,201	698	1,965		944	277	4	85	48	20	1	4,042	- 14,159

## Quebec

## Males -

	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
10-14 .....	- 4,125	16	115	365	1,311	62	30	23	60	1	1,983	- 2,142
15-19 .....	- 4,950	36	176	480	976	76	56	40	59	3	1,902	- 3,048
20-24 .....	- 8,053	79	392	905	1,423	148	187	92	111	2	3,339	- 4,714
25-29 .....	- 8,327	127	460	891	2,136	280	284	157	198	- 7	4,526	- 3,801
30-34 .....	- 6,934	91	245	539	1,163	251	276	92	136	- 1	2,790	- 4,144
35-39 .....	- 5,505	41	46	308	461	82	207	32	49	3	1,225	- 4,280
40-44 .....	- 1,586	28	- 12	168	184	52	- 29	- 9	9	8	439	- 1,147
45-49 .....	553	12	- 12	50	368	- 10	21	- 23	5	8	419	972
50-54 .....	1,546	164	- 109	277	229	11	-	8	2	11	811	2,357
55-59 .....	1,675	16	- 13	196	115	12	3	- 1	7	- 1	334	2,009
60-64 .....	1,785	5	- 14	37	97	22	-	4	4	10	165	1,950
65-69 .....	1,301	127	- 5	17	45	121	6	-	6	4	321	1,622
70+ .....	- 3,870	4	- 12	27	16	5	4	- 2	- 2	1	41	- 3,829

Totals, males, 10+ ..

- 36,490	746	1,520	4,260	8,524	1,112	1,045	413	644	31	18,295	- 18,195
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## Females -

	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
10-14 .....	- 4,112	22	91	491	1,313	70	33	27	57	- 1	2,103	- 2,009
15-19 .....	- 3,819	51	158	618	972	33	49	24	66	10	1,981	- 1,838
20-24 .....	- 4,967	145	539	1,416	2,049	173	161	96	130	1	4,710	- 257
25-29 .....	- 7,100	162	748	1,342	2,207	331	334	152	201	- 6	5,471	- 1,629
30-34 .....	- 6,883	22	470	392	1,188	383	160	93	124	9	2,841	- 4,042
35-39 .....	- 5,984	- 16	74	79	244	79	30	12	56	5	563	- 5,421
40-44 .....	- 846	12	42	79	194	22	137	- 1	- 9	- 2	474	- 372
45-49 .....	1,401	3	3	237	231	5	12	- 5	5	5	496	1,897
50-54 .....	2,164	7	146	104	148	32	- 1	4	12	2	454	2,618
55-59 .....	1,771	3	20	95	25	8	3	5	11	4	174	1,945
60-64 .....	984	10	6	31	43	17	11	5	10	-	133	1,117
65-69 .....	- 550	23	2	31	- 38	3	1	2	133	2	157	- 393
70+ .....	- 6,066	9	62	55	12	6	2	- 1	-	6	151	- 5,915

Totals, females, 10+ ..

- 34,007	453	2,361	4,970	8,588	1,162	930	413	796	35	19,708	- 14,299
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Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931-1941, 1941-1951 and 1951-1961 - continued

Province and age in 1951	Net migration of in-born	Net migration of out-born by province of birth										All provinces	Net balance of migration
		P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.		
		1941- 1951											
Ontario	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
Males -													
10- 14 .....	- 4,058	78	714	504	2,896		1,007	918	252	419	2	6,790	2,732
15- 19 .....	- 4,852	312	1,722	1,228	3,318		1,222	1,433	533	597	4	10,369	5,517
20- 24 .....	- 8,138	648	3,496	2,506	5,578		2,233	2,843	881	1,005	5	19,195	11,057
25- 29 .....	- 10,986	538	3,120	2,472	5,231		2,445	2,921	920	1,161	2	18,810	7,824
30- 34 .....	- 11,019	362	2,066	1,623	3,033		1,496	1,927	473	798	2	11,780	761
35- 39 .....	- 8,857	195	1,131	959	1,965		448	621	151	323	-	5,793	- 3,064
40- 44 .....	- 1,364	131	636	534	1,500		287	230	52	78	- 2	3,446	2,082
45- 49 .....	- 1,743	94	370	347	1,060		200	129	33	60	- 7	2,300	4,043
50- 54 .....	- 3,272	49	207	234	889		206	78	19	4	- 4	1,682	4,954
55- 59 .....	- 3,683	45	109	154	582		78	49	11	23	1	1,052	4,735
60- 64 .....	- 3,120	19	91	95	427		77	27	11	8	-	739	3,859
65- 69 .....	- 2,332	22	19	64	410		89	4	2	-	- 4	614	2,946
70+ .....	- 4,511	17	50	45	21		68	- 10	- 5	- 1	- 1	184	- 4,327
Totals, males, 10+ ..	- 39,635	2,510	13,731	10,765	26,910		9,856	11,170	3,333	4,459	20	82,754	43,119
Females -													
10- 14 .....	- 4,078	70	696	472	2,831		943	892	238	440	3	6,585	2,507
15- 19 .....	- 3,597	198	1,044	765	2,621		1,059	1,262	343	463	3	7,758	4,161
20- 24 .....	- 6,716	466	2,445	1,654	3,615		2,063	2,532	705	829	1	14,310	7,594
25- 29 .....	- 12,291	520	3,136	2,012	3,871		2,945	3,726	1,049	1,216	1	18,476	6,185
30- 34 .....	- 12,480	246	1,786	1,330	2,618		1,681	2,018	491	605	2	10,777	- 1,703
35- 39 .....	- 10,474	142	888	627	1,724		791	841	81	228	-	5,322	- 5,152
40- 44 .....	- 1,858	86	542	415	1,030		548	301	81	20	1	3,024	1,166
45- 49 .....	- 2,815	54	255	262	861		341	218	28	20	1	2,040	4,855
50- 54 .....	- 3,948	49	203	182	743		222	135	15	10	3	1,562	5,510
55- 59 .....	- 3,793	33	135	115	499		191	55	21	10	2	1,061	4,854
60- 64 .....	- 2,826	41	89	103	411		121	46	2	-	6	819	3,645
65- 69 .....	- 544	15	85	81	328		82	6	1	-	- 2	596	1,140
70+ .....	- 6,643	29	123	85	22		71	-	4	- 1	- 2	331	- 6,312
Totals, females, 10+ ..	- 44,212	1,949	11,427	8,103	21,174		11,058	12,032	3,059	3,840	19	72,661	28,450

1941 - 1951

## Manitoba

## Males -

	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
10-14 .....	- 3,578	-	16	10	47	286	917	111	88	5	1,480	- 2,098
15-19 .....	- 3,590	4	45	22	60	170	817	84	80	3	1,285	- 2,305
20-24 .....	- 5,725	18	104	62	193	455	1,140	224	141	3	2,340	- 3,385
25-29 .....	- 6,699	18	92	58	164	486	880	182	115	-	1,995	- 4,704
30-34 .....	- 5,469	11	54	41	100	187	461	31	75	1	961	- 4,508
35-39 .....	- 3,767	8	27	16	70	- 10	120	- 85	6	1	153	- 3,614
40-44 .....	- 1,519	-	5	- 2	- 11	- 83	109	- 31	- 12	3	- 32	- 1,551
45-49 .....	- 388	- 13	7	-	20	- 18	97	- 3	- 2	-	85	- 300
50-54 .....	52	- 2	- 16	1	5	- 47	44	6	-	-	11	41
55-59 .....	307	- 2	- 6	- 2	14	- 106	67	-	7	2	- 14	293
60-64 .....	298	1	- 16	- 10	- 3	- 51	29	-	- 2	2	- 50	248
65-69 .....	143	- 8	- 19	- 1	- 14	- 139	15	1	- 2	2	- 165	- 22
70+ .....	- 94	8	- 9	- 9	- 66	- 574	5	5	1	2	- 637	- 731

Totals, males, 10+ ..

- 30,029	43	286	186	579	556		4,701	525	494	23	7,393	- 22,636
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## Females -

10-14 .....	- 3,408	1	21	6	40	300	817	88	117	6	1,396	- 2,012
15-19 .....	- 3,101	3	8	6	10	201	1,053	98	59	4	1,442	- 1,659
20-24 .....	- 5,202	20	56	31	77	381	1,820	224	102	-	2,711	- 2,491
25-29 .....	- 7,709	31	154	75	137	542	1,256	234	131	5	2,565	- 5,144
30-34 .....	- 6,478	13	76	53	84	200	128	49	49	2	654	- 5,824
35-39 .....	- 4,284	8	26	16	59	8	- 29	- 36	- 5	2	49	- 4,235
40-44 .....	- 1,730	- 3	- 4	10	47	- 64	51	- 33	- 25	5	- 16	- 1,746
45-49 .....	- 305	6	18	- 2	24	- 100	77	3	- 14	-	12	- 293
50-54 .....	100	9	- 14	3	6	- 38	62	7	- 3	1	33	133
55-59 .....	157	- 6	1	-	25	- 27	63	5	- 3	-	59	216
60-64 .....	131	- 5	- 4	- 8	- 42	- 114	46	2	-	3	- 122	9
65-69 .....	- 52	- 5	- 26	6	- 21	- 177	1	- 2	- 2	- 1	- 227	- 279
70+ .....	- 193	2	- 17	-	- 61	- 645	-	- 5	1	2	- 723	- 916

Totals, females, 10+ ..

- 32,074	74	295	197	385	467		5,345	634	407	29	7,833	- 24,241
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Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931-1941, 1941-1951 and 1951-1961 - continued

Province and age in 1951	Net migration of in-born	Net migration of out-born by province of birth										All prov- inces	Net balance of migration
		P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.		
1941- 1951													
Saskatchewan	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.
Males -													
10-14 .....	- 7,410	4	3	8	-	147	383		213	91	5	854	- 6,556
15-19 .....	- 8,559	7	20	12	35	81	154		109	9	5	432	- 8,127
20-24 .....	- 12,693	6	32	9	67	207	181		218	12	- 1	731	- 11,962
25-29 .....	- 12,790	9	27	10	51	166	120		50	- 24	3	412	- 12,378
30-34 .....	- 10,448	- 11	10	7	-	5	184		- 143	- 44	- 1	361	- 10,809
35-39 .....	- 6,151	- 1	- 25	- 6	- 36	- 173	- 232		- 107	- 70	- 3	- 653	- 6,804
40-44 .....	- 1,929	- 11	- 18	1	- 75	- 341	- 356		- 35	- 33	- 3	- 871	- 2,800
45-49 .....	- 149	- 16	- 15	- 10	- 56	- 347	- 204		2	- 13	3	- 656	- 805
50-54 .....	331	- 21	- 40	- 16	- 57	- 309	- 164		- 7	- 10	- 2	- 626	- 295
55-59 .....	380	- 17	- 15	10	- 101	- 280	- 136		11	- 11	-	- 539	- 159
60-64 .....	273	- 12	- 31	- 15	- 78	- 400	- 73		- 3	- 3	- 3	- 618	- 345
65-69 .....	140	- 12	- 31	- 30	- 63	- 554	- 66		- 3	5	- 2	- 756	- 616
70+ .....	- 24	- 18	- 31	- 26	- 133	- 641	- 48		- 2	- 4	- 3	- 906	- 930
Totals, males, 10+ ..	- 59,029	- 93	- 114	- 46	- 446	- 2,439	- 625		303	- 95	- 2	- 3,557	- 62,586
Females -													
10-14 .....	- 7,236	1	6	3	20	148	338		201	90	4	811	- 6,426
15-19 .....	- 8,552	4	3	5	7	38	160		108	39	- 2	362	- 8,189
20-24 .....	- 13,431	4	30	7	19	109	129		228	27	- 1	552	- 12,879
25-29 .....	- 15,198	12	110	51	64	283	102		149	69	-	840	- 14,358
30-34 .....	- 10,499	- 4	38	12	56	90	2		- 16	- 6	- 1	171	- 10,328
35-39 .....	- 6,297	- 7	- 16	- 3	- 17	- 135	- 277		- 144	- 61	1	- 659	- 6,956
40-44 .....	- 2,091	- 3	- 7	- 7	- 49	- 248	- 313		- 68	- 33	- 5	- 733	- 2,824
45-49 .....	- 221	2	- 15	- 9	- 60	- 283	- 295		- 28	- 16	5	- 699	- 920
50-54 .....	204	- 10	- 44	- 11	- 65	- 278	- 123		- 8	-	3	- 536	- 332
55-59 .....	247	- 17	- 15	- 1	- 62	- 345	- 155		2	-	2	- 591	- 344
60-64 .....	131	- 4	- 41	- 17	- 53	- 585	- 116		-	-	17	- 814	- 683
65-69 .....	50	- 18	- 35	- 23	- 82	- 508	- 77		- 6	- 1	4	- 746	- 696
70+ .....	- 94	6	- 42	- 22	- 60	- 676	- 87		- 13	- 2	-	- 896	- 990
Totals, females, 10+	- 62,987	- 34	- 28	- 15	- 282	- 2,390	- 712		405	106	12	- 2,938	- 65,925

1941-1951												
Alberta												
	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.
Males -												
10-14 .....	- 3,754	6	63	17	121	276	336	1,670	524	31	3,044	- 710
15-19 .....	- 3,827	15	170	95	278	506	371	2,020	358	24	3,837	10
20-24 .....	- 5,119	36	270	162	484	1,091	725	2,936	508	25	6,237	1,118
25-29 .....	- 5,252	38	187	148	369	843	679	2,637	389	16	5,306	54
30-34 .....	- 4,430	26	127	82	182	615	533	1,936	168	18	3,687	- 743
35-39 .....	- 2,985	22	52	18	141	301	388	1,055	20	4	2,001	- 984
40-44 .....	- 968	12	15	17	53	117	245	481	- 25	6	971	3
45-49 .....	- 6	23	6	25	61	44	182	210	- 20	13	544	538
50-54 .....	185	7	27	- 1	- 1	6	139	100	- 7	5	275	460
55-59 .....	206	6	8	- 3	13	44	126	65	- 9	4	254	460
60-64 .....	137	22	37	17	33	59	23	43	1	- 1	234	371
65-69 .....	47	- 12	- 10	- 16	- 31	- 130	19	40	-	1	- 139	- 92
70+ .....	- 132	19	12	- 17	- 78	- 252	- 16	3	- 8	2	- 332	- 464
Totals, males, 10+ ..	- 25,898	220	984	544	1,625	3,520	3,750	13,196	1,949	148	25,919	21
Females -												
10-14 .....	- 3,700	5	35	25	106	261	265	1,757	489	28	2,971	- 729
15-19 .....	- 3,743	7	29	15	66	127	292	1,987	340	24	2,887	- 856
20-24 .....	- 5,249	16	112	43	117	399	507	3,077	507	24	4,802	- 447
25-29 .....	- 5,522	48	223	111	198	742	701	2,812	407	11	5,253	- 1,269
30-34 .....	- 4,916	31	130	90	160	431	532	1,768	156	17	3,315	- 1,601
35-39 .....	- 3,276	10	85	33	103	278	290	942	30	4	1,775	- 1,501
40-44 .....	- 1,047	9	13	13	53	129	134	422	- 24	-	749	- 298
45-49 .....	- 103	11	13	6	18	16	110	199	-	5	378	275
50-54 .....	88	- 8	1	16	16	82	91	67	- 4	6	267	355
55-59 .....	70	7	22	- 2	- 11	- 3	42	48	- 13	1	91	161
60-64 .....	16	6	2	4	5	43	41	21	- 2	2	122	138
65-69 .....	18	7	- 26	- 12	- 18	- 154	- 17	24	- 13	- 1	- 210	- 228
70+ .....	- 190	5	18	- 1	- 10	- 57	- 7	7	- 10	9	- 46	- 236
Totals, females, 10+ ..	- 28,590	154	657	341	803	2,294	2,981	13,131	1,863	130	22,354	- 6,236

Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931-1941, 1941-1951 and 1951-1961 - continued

Province and age in 1951	Net migration of in-born	Net migration of out-born by province of birth										All provi- nces	Net balance of migration
		P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.		
1941-1951													
British Columbia	No.	No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.
Males -													
10-14 .....	- 1,470	20	109	42	206	754	1,607	3,633	2,869		34	9,274	7,804
15-19 .....	- 1,612	31	200	101	238	805	1,416	3,781	2,548		19	9,139	7,527
20-24 .....	- 2,628	61	301	211	469	1,338	1,875	4,831	2,780		4	11,870	9,242
25-29 .....	- 3,449	47	322	257	440	1,535	2,073	4,888	2,526		- 3	12,085	8,636
30-34 .....	- 3,291	53	295	172	416	1,207	1,901	4,261	2,160		5	10,470	7,179
35-39 .....	- 2,417	41	203	165	314	1,062	1,801	2,939	1,366		12	7,903	5,486
40-44 .....	- 830	39	166	104	308	787	1,307	1,484	749		3	4,947	4,117
45-49 .....	- 199	14	119	90	221	781	896	676	286		11	3,094	2,895
50-54 .....	- 120	38	109	110	225	736	639	300	154		9	2,320	2,440
55-59 .....	- 198	22	87	69	214	830	489	209	92		1	2,013	2,211
60-64 .....	- 106	34	98	89	186	959	417	123	47		- 3	1,956	2,062
65-69 .....	- 13	26	129	59	191	1,152	286	56	11		- 3	1,907	1,920
70+ .....	- 547	45	84	114	170	1,214	97	22	- 6		3	1,743	1,196
Totals, males, 10+ ..	- 16,006	471	2,222	1,583	3,598	13,160	14,804	27,203	15,582		98	78,721	62,715
Females -													
10-14 .....	- 1,526	9	99	62	180	706	1,586	3,517	2,865		42	9,066	7,540
15-19 .....	- 1,412	10	76	44	164	602	1,293	3,915	2,808		22	8,934	7,522
20-24 .....	- 2,540	26	162	84	201	799	1,826	5,345	3,253		16	11,712	9,172
25-29 .....	- 4,132	69	395	215	385	1,434	2,389	5,819	3,245		10	13,961	9,829
30-34 .....	- 3,603	46	311	145	357	1,143	2,269	4,771	2,186		18	11,246	7,643
35-39 .....	- 3,014	40	124	111	296	865	1,827	3,032	1,377		2	7,674	4,660
40-44 .....	- 1,026	24	113	97	184	762	1,347	1,527	623		14	4,691	3,665
45-49 .....	- 257	13	128	62	200	652	899	753	421*		12	3,140	2,883
50-54 .....	- 13	42	116	81	176	780	671	356	199		- 1	2,420	2,407
55-59 .....	- 22	28	86	58	141	774	571	262	96		9	2,025	2,003
60-64 .....	- 56	44	116	47	159	947	474	141	17		4	1,949	1,893
65-69 .....	- 234	44	128	45	155	813	270	51	- 17		7	1,496	1,262
70+ .....	- 803	32	60	67	178	955	93	10	- 24		- 4	1,367	564
Totals, females, 10+ .	- 18,638	427	1,914	1,118	2,776	11,232	15,515	29,499	17,049		151	79,681	61,043

Yukon and Northwest  
Territories

## Males -

10-14	- 89	-	4	1	8	10	4	24	7	5		63	- 26
15-19	- 77	-	9	6	5	25	20	37	29	16		147	70
20-24	- 55	6	43	17	67	138	76	191	250	83		871	816
25-29	- 55	3	43	21	55	184	106	163	166	66		807	752
30-34	- 78	6	30	18	39	110	67	130	55	5		460	382
35-39	- 80	2	16	11	32	51	38	13	10	- 32		141	61
40-44	- 38	3	20	- 3	9	24	30	15	- 10	- 16		72	34
45-49	- 49	1	4	6	2	30	16	-	- 9	4		54	5
50-54	- 12	- 3	3	- 3	3	29	1	- 1	- 7	1		23	11
55-59	- 12	- 1	- 4	3	- 3	- 12	-	1	- 7	-		- 23	- 35
60-64	- 6	1	2	-	- 4	3	1	3	-	- 1		5	- 1
65-69	- 10	- 3	-	- 3	- 5	5	2	- 2	- 2	1		- 7	- 17
70+	- 58	- 4	- 8	- 3	- 12	- 24	-	- 2	- 6	- 5		- 64	- 122

Totals, males, 10+.

- 619	11	162	71	196	573	361	572	476	127		2,549	1,930
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## Females -

10-14	- 94	-	3	-	14	9	6	6	- 2	14		50	- 44
15-19	- 72	-	1	-	5	11	- 3	14	- 5	-		23	- 49
20-24	- 62	3	7	3	7	30	20	58	83	31		242	180
25-29	- 75	1	16	6	32	93	50	108	100	47		453	378
30-34	- 108	2	9	7	27	67	45	62	64	27		310	202
35-39	- 79	3	6	5	8	21	28	41	5	- 8		109	30
40-44	- 43	1	5	1	- 2	11	- 1	4	- 8	- 3		12	- 31
45-49	- 32	1	-	-	2	2	4	3	2	- 5		6	- 26
50-54	- 16	-	- 2	3	- 10	5	- 1	1	-	5		1	- 15
55-59	- 17	-	- 1	- 3	- 1	4	2	2	2	3		13	- 4
60-64	- 19	- 1	2	-	- 2	-	1	1	- 1	1		2	- 17
65-69	- 25	-	- 1	- 1	- 5	3	-	-	- 3	- 1		- 8	- 33
70+	- 67	- 1	-	1	- 5	- 1	-	-	- 4	- 2		- 12	- 79

Totals, females, 10+.

- 709	9	49	25	70	255	151	300	233	109		1,201	492
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Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931-1941, 1941-1951 and 1951-1961 - continued

Province and age in 1961	Net migration of in-born	Net migration of out-born by province of birth											All provinces	Net balance of migration
		Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.		
1951-1961														
Newfoundland	No.		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Males -														
10-14 .....	- 1,256		- 2	56	13	34	53	13	6	1	22	-	196	- 1,060
15-19 .....	- 1,019		- 8	38	30	17	18	1	5	1	3	-	105	- 914
20-24 .....	- 2,439		17	139	84	141	91	17	8	15	10	-	522	- 1,917
25-29 .....	- 1,938		6	111	84	171	100	21	27	10	23	1	554	- 1,384
30-34 .....	- 666		- 2	52	14	108	18	7	- 4	14	7	2	216	- 450
35-39 .....	- 721		- 10	12	12	65	22	1	- 5	14	6	1	118	- 603
40-44 .....	142		1	5	6	70	7	3	4	- 1	1	-	96	238
45-49 .....	182		- 14	22	- 9	32	13	-	- 1	- 2	- 5	1	37	219
50-54 .....	- 118		- 6	15	- 2	13	2	1	1	-	- 2	-	22	- 96
55-59 .....	- 118		- 4	7	1	11	3	- 1	1	-	1	-	19	- 99
60-64 .....	- 66		- 3	- 3	- 1	- 1	- 5	- 1	-	-	-	-	- 14	- 80
65-69 .....	17		- 2	-	- 3	- 1	- 2	-	-	-	- 1	-	- 9	8
70+ .....	133		- 10	- 9	- 3	1	- 3	-	-	-	-	-	- 24	109
Totals, males, 10+.	- 7,867		- 37	445	226	661	317	62	42	52	65	5	1,838	- 6,029
Females -														
10-14 .....	- 1,120		- 1	59	24	18	93	7	5	- 1	13	2	219	- 901
15-19 .....	- 1,084		- 3	43	12	2	- 7	5	- 1	5	- 3	-	53	- 1,031
20-24 .....	- 2,097		10	124	66	24	49	10	15	12	6	- 2	314	- 1,783
25-29 .....	- 2,222		10	122	69	51	80	25	27	19	14	-	417	- 1,805
30-34 .....	- 1,187		-	83	29	22	47	15	16	10	6	1	229	- 958
35-39 .....	- 764		- 5	31	18	4	- 1	6	1	- 2	1	- 1	52	- 712
40-44 .....	79		- 1	15	- 9	2	- 7	10	- 3	- 1	- 1	-	5	84
45-49 .....	103		- 4	17	7	1	4	5	5	2	- 4	-	33	136
50-54 .....	- 269		- 3	14	12	- 1	1	- 1	3	- 1	2	1	27	- 242
55-59 .....	- 155		- 2	15	-	- 4	-	- 3	- 1	-	2	-	15	- 140
60-64 .....	- 99		- 3	- 1	- 1	- 4	-	2	-	-	-	- 2	- 9	- 108
65-69 .....	- 150		- 5	-	-	- 1	- 1	1	-	-	-	-	- 6	- 156
70+ .....	- 220		- 3	2	- 1	- 3	2	-	- 1	-	-	-	- 4	- 224
Totals, females, 10+.	- 9,185		- 10	524	226	119	260	82	66	43	36	- 1	1,345	- 7,840

Prince Edward  
Island

**Males -**

Age Group	Number of Deaths
10-14	1
15-19	1
20-24	1
25-29	1
30-34	1
35-39	1
40-44	1
45-49	1
50-54	1
55-59	1
60-64	1
65-69	1
70+	1

Totals, moles, 10+.

**Females –**

10-14	.....
15-19	.....
20-24	.....
25-29	.....
30-34	.....
35-39	.....
40-44	.....
45-49	.....
50-54	.....
55-59	.....
60-64	.....
65-69	.....
70+	.....

**Totals, females, 10 +**

1951 - 1961													
No.	No.		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
- 727	5		38	9	18	- 4	7	1	- 7	- 2	- 1	64	- 663
- 517	- 4		23	- 2	6	- 30	-	- 2	- 3	- 6	-	- 18	- 535
- 1,344	23		100	38	13	35	6	14	7	10	-	246	- 1,098
- 1,334	4		97	75	8	36	- 2	2	5	7	-	232	- 1,102
- 595	- 7		1	11	- 10	- 43	- 12	- 16	- 17	- 5	-	- 98	- 693
- 310	4		- 15	- 17	- 15	- 36	-	- 16	- 13	- 5	- 1	- 114	- 424
- 165	1		- 4	- 6	- 1	- 20	- 9	- 19	- 15	1	-	- 72	- 237
- 66	- 5		18	7	- 4	- 14	- 9	- 7	2	- 4	-	- 16	- 82
- 90	-		4	- 10	3	- 6	-	- 3	-	- 2	-	- 14	- 104
- 14	1		5	2	- 1	1	1	- 1	1	- 1	-	4	- 10
65	2		8	4	- 1	-	-	-	-	-	-	13	78
63	2		2	- 1	-	5	-	-	-	-	-	8	71
93	5		-	- 9	3	3	-	-	-	-	1	3	96
- 4,941	31		273	104	18	- 75	- 14	- 47	- 44	- 7	- 1	238	- 4,703
- 707	- 3		47	33	- 10	2	3	-	- 7	- 3	-	62	- 645
- 589	1		- 14	15	- 6	- 7	-	- 1	- 3	- 5	-	- 20	- 609
- 1,460	11		60	44	12	9	11	7	5	7	-	166	- 1,294
- 1,562	10		92	38	9	33	6	6	9	2	-	205	- 1,357
- 737	2		67	- 2	- 4	- 1	5	-	- 2	- 6	-	57	- 680
- 352	- 1		- 29	- 4	5	- 22	5	- 14	- 3	- 1	-	- 64	- 416
- 95	- 5		11	- 3	- 3	- 20	- 2	- 8	- 3	-	-	- 33	- 128
- 51	- 4		7	3	- 5	- 2	- 3	1	1	- 5	-	- 7	- 58
- 51	- 1		5	11	- 8	- 5	- 2	-	- 2	- 1	-	- 3	- 54
- 42	-		- 4	13	- 2	1	2	1	- 2	- 2	-	- 9	- 34
- 11	- 3		- 3	-	3	-	-	1	-	-	-	- 4	- 15
- 4	- 1		- 4	- 6	- 1	- 1	-	-	- 1	-	-	- 6	- 2
2	2		5	1	2	3	- 1	-	-	- 1	-	13	15
- 5,651	11		248	143	- 11	- 7	24	- 7	- 8	- 18	-	375	- 5,276

Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931-1941, 1941-1951 and 1951-1961 - continued

Province and age in 1961	Net migration of in-born	Net migration of out-born by province of birth											All provinces	Net balance of migration
		Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.		
1951 - 1961														
Nova Scotia														
	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Males -														
10-14 .....	- 4,087	194	90		193	170	379	46	36	62	63	5	1,238	- 2,849
15-19 .....	- 3,351	181	61		91	335	874	95	109	152	116	-	2,014	- 1,337
20-24 .....	- 6,365	343	152		423	708	1,853	164	215	213	176	1	4,248	- 2,117
25-29 .....	- 5,857	308	143		357	322	710	47	37	11	6	2	1,931	- 3,926
30-34 .....	- 2,228	128	66		47	- 136	- 388	- 21	- 54	- 44	- 25	6	- 421	- 2,649
35-39 .....	- 1,887	30	- 17		11	- 50	- 91	- 29	- 28	- 22	- 34	- 2	- 232	- 2,119
40-44 .....	- 603	32	32		- 18	12	- 45	- 8	- 38	3	- 48	-	- 78	- 681
45-49 .....	- 246	46	18		- 2	- 38	- 43	- 4	- 16	- 2	- 42	-	- 75	- 321
50-54 .....	- 554	- 51	10		- 27	- 5	- 18	- 1	-	- 6	- 16	1	- 112	- 666
55-59 .....	- 135	4	1		- 20	-	- 10	- 6	- 2	- 2	- 8	- 1	- 44	- 179
60-64 .....	30	21	15		-	- 2	- 1	2	-	-	- 1	-	31	61
65-69 .....	168	- 31	- 28		- 30	-	- 5	4	- 2	-	- 3	-	- 95	73
70+ .....	479	45	- 12		- 12	22	10	2	1	3	1	- 1	59	538
Totals, males, 10+.	- 24,636	1,250	531		1,013	1,338	3,225	299	259	369	169	11	8,464	- 16,172
Females -														
10-14 .....	- 3,868	143	98		163	154	399	44	23	23	68	- 2	1,113	- 2,755
15-19 .....	- 3,022	219	94		100	49	143	14	23	27	40	- 3	706	- 2,316
20-24 .....	- 6,153	298	196		307	159	429	101	86	80	60	1	1,717	- 4,436
25-29 .....	- 6,541	222	177		296	213	489	86	99	67	57	- 1	1,705	- 4,836
30-34 .....	- 3,534	14	64		124	111	271	54	76	45	38	-	797	- 2,737
35-39 .....	- 2,155	- 34	54		- 12	26	70	23	26	14	3	- 1	169	- 1,986
40-44 .....	- 364	23	16		- 11	25	31	8	5	- 1	- 1	-	95	- 269
45-49 .....	- 238	41	37		- 7	- 3	- 19	- 6	- 13	12	- 17	-	- 25	- 213
50-54 .....	- 603	- 54	2		- 47	- 4	- 4	6	- 4	- 3	- 9	-	- 117	- 720
55-59 .....	- 94	- 19	- 3		3	- 1	- 9	4	- 1	- 3	- 5	-	- 4	- 90
60-64 .....	- 88	- 23	- 6		- 19	15	9	4	- 2	- 1	- 3	1	- 17	- 105
65-69 .....	93	23	-		- 8	9	- 1	1	1	-	- 2	-	17	110
70+ .....	308	67	25		47	5	7	- 1	1	- 1	- 2	-	148	456
Totals, females, 10+.	- 26,259	958	756		936	758	1,815	338	320	259	227	- 5	6,362	- 19,897

## New Brunswick

## Males -

10-14.....	- 3,107	39	117	510		200	300	48	15	11	45	3	1,288	- 1,819
15-19.....	- 2,353	51	82	432		97	191	18	23	25	29	-	948	- 1,405
20-24.....	- 5,473	175	120	757		145	308	50	61	42	39	2	1,699	- 3,774
25-29.....	- 5,336	101	144	685		125	297	30	69	29	28	-	1,508	- 3,828
30-34.....	- 2,203	29	64	372		123	188	25	20	11	27	-	859	- 1,344
35-39.....	- 1,507	37	43	143		66	135	18	19	4	- 11	2	456	- 1,051
40-44.....	- 732	15	24	146		8	57	24	22	- 10	- 12	-	298	- 434
45-49.....	- 337	-	24	77		- 33	31	-	- 3	2	- 3	4	99	- 238
50-54.....	- 452	5	2	3		- 6	- 20	7	- 4	1	- 5	-	- 17	- 469
55-59.....	- 26	9	20	6		- 23	- 6	- 4	- 2	1	- 1	1	- 1	- 25
60-64.....	110	- 3	8	16		- 18	- 8	-	- 2	- 1	- 3	-	- 11	99
65-69.....	201	13	7	- 2		4	2	3	1	-	- 1	-	27	228
70 +.....	261	8	30	10		42	- 4	-	-	- 2	2	-	86	347

Totals, males, 10+ - 20,954 479 685 3,155 730 1,471 219 219 113 158 12 7,241 - 13,713

## Females -

10-14.....	- 3,057	27	85	492		224	307	45	14	30	30	5	1,259	- 1,798
15-19.....	- 2,565	20	55	266		158	75	20	- 1	- 4	16	1	606	- 1,959
20-24.....	- 5,465	54	139	583		169	206	38	40	32	22	-	1,283	- 4,182
25-29.....	- 5,741	68	92	513		86	269	60	41	45	16	1	1,191	- 4,550
30-34.....	- 3,024	28	10	223		91	175	55	13	20	10	1	626	- 2,398
35-39.....	- 1,787	1	19	126		42	60	31	23	1	- 3	-	297	- 1,490
40-44.....	- 532	17	47	124		- 12	39	13	21	-	- 3	-	270	- 262
45-49.....	- 327	- 10	12	75		- 23	3	1	- 1	3	-	- 1	62	- 265
50-54.....	- 479	- 14	- 6	40		-	- 9	- 6	- 10	- 7	1	-	- 11	- 490
55-59.....	9	- 4	3	17		- 1	2	4	- 3	- 1	- 3	-	14	23
60-64.....	- 15	4	- 5	11		4	- 9	- 1	- 3	-	- 1	2	2	- 13
65-69.....	- 28	3	4	- 10		2	2	- 1	-	1	2	-	3	- 25
70+.....	307	19	4	50		43	- 11	- 1	- 1	- 1	- 1	-	101	408

Totals, females, 10+ - 22,704 213 459 2,510 807 1,109 258 133 119 85 10 5,703 - 16,999

Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931- 1941, 1941- 1951 and 1951- 1961 - continued

Province and age in 1961	Net migration of in-born	Net migration of out-born by province of birth											All prov- inces	Net balance of migration		
		Nfld.	P. E. I.	N. S.	N. B.	Que.	Ont.	Man.	Sask.	Alta.	B. C.	Y. T. and N. W. T.				
		1951- 1961														
Quebec	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.		
Males -																
10- 14 .....	- 6,018	48	47	311	891		1,901	193	76	92	202	23	3,784	- 2,234		
15- 19 .....	- 3,992	55	32	271	732		698	71	80	75	79	- 1	2,092	- 1,900		
20- 24 .....	- 6,989	202	94	466	1,612		1,359	133	200	152	162	2	4,382	- 2,607		
25- 29 .....	- 7,804	164	88	499	1,534		2,026	220	231	178	188	14	5,142	- 2,662		
30- 34 .....	- 4,186	32	54	221	803		1,507	161	125	92	89	3	3,087	- 1,099		
35- 39 .....	- 2,947	12	13	93	441		469	118	100	24	33	3	1,306	- 1,641		
40- 44 .....	- 2,157	- 8	28	103	378		480	49	20	11	- 10	6	1,057	- 1,100		
45- 49 .....	- 2,231	- 25	7	43	151		245	88	- 104	4	- 10	- 2	397	- 1,834		
50- 54 .....	- 700	- 24	5	12	179		- 39	- 2	2	4	- 2	2	137	- 563		
55- 59 .....	1,328	- 8	4	24	79		- 160	16	- 5	8	- 12	- 4	- 58	1,270		
60- 64 .....	617	- 10	- 131	- 106	- 133		- 34	- 11	- 4	- 8	- 8	- 9	- 454	163		
65- 69 .....	407	- 1	- 2	- 18	- 111		- 116	- 2	-	-	- 18	1	- 263	144		
70+ .....	2,273	- 14	- 59	9	129		135	- 53	-	- 1	- 10	-	136	2,409		
Totals, males, 10+	- 32,399	423	180	1,928	6,685		8,471	985	721	631	683	38	20,745	- 11,654		
Females -																
10- 14 .....	- 5,663	63	49	310	876		1,631	31	38	123	180	30	3,331	- 2,382		
15- 19 .....	- 3,663	64	35	292	953		876	88	90	64	91	-	2,553	- 1,110		
20- 24 .....	- 6,436	185	156	671	1,885		1,754	204	192	200	181	7	5,435	- 1,001		
25- 29 .....	- 9,187	166	136	582	1,688		2,283	311	270	183	145	6	5,770	- 3,417		
30- 34 .....	- 7,089	25	37	249	646		1,324	215	189	113	27	4	2,829	- 4,260		
35- 39 .....	- 4,508	- 30	5	79	340		575	107	85	46	- 6	8	1,209	- 3,299		
40- 44 .....	- 2,246	16	- 15	- 101	304		125	- 93	21	- 5	- 6	- 1	245	- 2,001		
45- 49 .....	- 1,178	18	- 5	49	206		157	40	24	7	- 8	3	491	- 687		
50- 54 .....	- 690	- 17	- 11	- 4	197		- 66	18	- 110	- 13	- 3	8	- 1	- 691		
55- 59 .....	854	2	8	3	- 72		14	- 6	- 7	- 10	- 8	- 4	- 80	774		
60- 64 .....	28	- 12	10	- 76	31		- 36	- 4	5	- 2	- 12	1	- 95	- 67		
65- 69 .....	- 169	26	7	- 36	48		- 45	7	3	- 5	- 18	3	- 10	179		
70+ .....	3,283	1	14	- 41	176		208	13	- 2	- 2	- 91	- 1	357	3,640		
Totals, females, 10+	- 36,664	507	426	2,059	7,278		8,800	931	798	699	472	64	22,034	14,630		

## Ontario

## Males -

	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
10-14 .....	- 11,627	331	256	1,754	1,299	3,950	1,174	680	696	768	78	10,986	- 641
15-19 .....	- 5,576	446	251	1,797	1,119	2,657	581	483	315	478	8	8,135	2,559
20-24 .....	- 9,884	1,081	706	3,465	2,476	3,552	846	1,059	550	514	9	14,258	4,374
25-29 .....	- 9,742	873	691	3,144	2,365	3,343	1,069	1,216	494	498	6	13,699	3,957
30-34 .....	- 5,245	259	287	1,040	890	1,075	612	474	136	180	3	4,956	- 289
35-39 .....	- 6,620	95	146	657	527	422	431	300	22	87	-	2,687	- 3,933
40-44 .....	- 971	135	158	855	415	534	308	408	193	76	- 9	3,091	4,062
45-49 .....	- 1,222	74	124	551	289	227	286	164	114	181	3	2,013	3,235
50-54 .....	- 2,114	40	86	292	224	- 63	37	46	- 15	- 26	2	623	- 1,491
55-59 .....	- 571	54	16	172	77	- 34	- 5	13	- 42	- 14	- 5	232	- 339
60-64 .....	- 1,005	16	33	61	65	- 126	- 31	- 12	- 19	- 6	3	- 16	- 1,021
65-69 .....	- 8	12	13	24	59	- 108	43	- 3	- 12	- 18	6	16	8
70+ .....	1,021	86	44	137	133	- 29	91	53	15	10	5	545	1,566

## Totals, males, 10+

- 49,178	3,502	2,811	13,949	9,938	15,400	5,442	4,881	2,447	2,728	127	61,225	12,047
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## Females -

10-14 .....	- 11,064	302	278	1,623	1,302	3,623	1,102	580	700	881	72	10,463	- 601
15-19 .....	- 5,430	416	289	1,663	1,090	2,469	579	437	276	297	10	7,526	2,096
20-24 .....	- 9,482	959	748	3,334	2,374	3,438	1,178	1,237	723	564	14	14,569	5,087
25-29 .....	- 12,937	949	837	3,425	2,487	3,645	1,578	1,669	745	526	20	15,881	2,944
30-34 .....	- 9,261	500	412	1,694	1,356	2,451	1,044	910	420	331	10	9,128	- 133
35-39 .....	- 7,950	175	164	966	813	1,354	554	305	160	- 91	5	4,405	- 3,545
40-44 .....	2,186	257	160	914	479	694	505	356	172	105	3	3,645	5,831
45-49 .....	1,957	162	116	681	432	621	297	243	95	87	7	2,741	4,698
50-54 .....	- 2,467	123	58	370	243	332	38	92	- 16	- 9	5	1,236	- 1,231
55-59 .....	- 675	78	60	252	162	80	54	- 21	- 20	-	10	655	- 20
60-64 .....	- 873	67	33	173	130	90	47	- 8	- 8	- 15	-	509	- 364
65-69 .....	- 323	53	39	77	102	32	- 3	19	- 21	- 12	6	292	- 31
70+ .....	1,240	200	65	256	168	395	129	47	18	10	- 1	1,287	2,527

## Totals, females, 10+

- 55,079	4,241	3,259	15,428	11,138	19,224	7,102	5,866	3,244	2,674	161	72,337	17,258
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Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931-1941, 1941-1951 and 1951-1961 - continued

Province and age in 1961	Net migration of in-born	Net migration of out-born by province of birth											All provinces	Net balance of migration	
		Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.			
1951-1961															
Manitoba	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.	No.	
Males -															
10-14 .....	- 5,049	12	25	101	57	91	798		656	263	213	12	2,228	- 2,821	
15-19 .....	- 2,430	12	10	92	48	84	343		407	61	49	2	1,108	- 1,322	
20-24 .....	- 3,735	90	45	259	152	257	748		830	169	132	3	2,685	- 1,050	
25-29 .....	- 4,634	53	41	264	136	259	801		659	227	129	6	2,575	- 2,059	
30-34 .....	- 3,132	27	14	102	38	78	447		97	10	63	4	880	- 2,252	
35-39 .....	- 2,520	5	14	89	38	69	173		-	33	- 5	4	420	- 2,100	
40-44 .....	- 894	6	3	26	55	11	163		56	- 8	- 31	- 2	279	- 615	
45-49 .....	- 762	- 3	- 2	10	3	- 1	42		82	1	-	3	135	- 627	
50-54 .....	- 525	1	2	12	- 8	- 19	13		- 34	- 17	- 19	1	- 68	- 593	
55-59 .....	- 136	1	5	12	-	5	- 61		- 28	- 22	- 9	6	- 115	- 251	
60-64 .....	- 46	- 4	- 3	- 12	- 9	-	- 45		10	- 14	- 5	6	- 58	- 104	
65-69 .....	51	-	- 12	- 16	- 14	- 34	- 48		- 9	- 5	- 13	1	- 150	- 99	
70+ .....	539	-	- 7	2	3	- 29	- 383		25	- 1	-	6	- 384	155	
Totals, males, 10+	- 23,273	200	135	917	517	771	2,991		2,751	697	504	52	9,535	- 13,738	
Females -															
10-14 .....	- 4,531	12	14	112	69	133	831		741	216	168	22	2,318	- 2,213	
15-19 .....	- 2,487	7	10	32	35	42	239		629	48	13	6	1,061	- 1,426	
20-24 .....	- 4,325	42	14	153	77	130	595		1,213	235	112	9	2,580	- 1,745	
25-29 .....	- 5,889	40	28	189	93	194	614		793	196	92	2	2,241	- 3,648	
30-34 .....	- 4,073	31	16	123	71	92	370		- 142	47	17	3	628	- 3,445	
35-39 .....	- 2,860	7	5	52	31	38	95		- 176	- 20	- 30	- 2	-	- 2,860	
40-44 .....	- 731	5	4	26	7	17	93		11	- 8	30	-	185	- 546	
45-49 .....	- 545	- 3	- 1	14	9	- 30	69		19	- 23	- 4	- 1	49	- 496	
50-54 .....	- 538	-	- 4	- 4	- 4	- 31	- 54		- 32	- 16	- 18	- 4	- 159	- 697	
55-59 .....	- 283	- 1	- 5	- 14	7	- 16	- 9		6	- 18	- 11	4	- 57	- 340	
60-64 .....	- 151	- 1	- 11	- 4	- 13	- 5	- 122		- 4	- 11	- 13	12	- 172	- 323	
65-69 .....	- 23	- 5	4	- 7	- 10	- 28	- 165		- 20	- 15	-	5	- 241	- 264	
70+ .....	548	5	5	23	- 12	- 6	- 408		25	1	1	7	- 359	189	
Totals, females, 10+	- 25,888	139	87	695	360	530	2,148		3,063	632	357	63	8,074	- 17,814	

## Saskatchewan

## Males -

	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.
10-14 .....	- 6,488	9	5	21	18	45	314	400	362	265	11	1,450	- 5,038
15-19 .....	- 4,227	4	3	41	16	58	60	154	106	3	2	447	- 3,780
20-24 .....	- 7,956	25	10	105	53	131	279	213	336	106	- 1	1,260	- 6,696
25-29 .....	- 8,775	16	14	59	46	75	325	400	416	41	- 1	1,391	- 7,384
30-34 .....	- 4,820	2	16	41	34	23	156	246	175	25	-	718	- 4,102
35-39 .....	- 3,257	4	- 8	36	20	11	42	- 44	27	8	- 6	90	- 3,167
40-44 .....	- 1,748	- 1	- 1	25	14	4	26	- 21	21	- 6	- 2	60	- 1,688
45-49 .....	- 1,012	6	- 1	11	- 2	- 15	- 6	- 69	- 32	- 8	4	- 112	- 1,124
50-54 .....	- 633	1	- 2	8	- 3	- 41	- 110	- 142	- 53	- 19	-	- 361	- 994
55-59 .....	- 68	- 1	6	11	4	- 16	- 155	- 186	- 47	- 16	40	- 360	- 428
60-64 .....	3	4	- 4	- 16	- 18	- 54	- 103	- 91	- 17	- 8	34	- 273	- 270
65-69 .....	142	- 4	27	- 10	- 12	- 14	- 175	- 82	- 16	- 5	15	- 276	- 134
70+ .....	412	-	12	12	2	75	124	1	- 2	-	26	250	662

Totals, males, 10+ - 38,427 65 78 344 172 282 777 779 1,276 386 125 4,284 - 34,143

## Females -

	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.
10-14 .....	- 6,342	11	6	40	15	52	322	349	338	230	8	1,371	- 4,971
15-19 .....	- 4,576	-	-	22	9	13	- 19	187	118	- 34	- 1	295	- 4,281
20-24 .....	- 9,074	11	6	41	21	38	182	288	313	26	-	926	- 8,148
25-29 .....	- 10,044	13	7	49	46	70	306	502	355	56	1	1,405	- 8,639
30-34 .....	- 5,525	4	15	38	29	87	209	192	187	49	2	812	- 4,713
35-39 .....	- 3,260	8	5	1	- 4	9	39	56	- 9	- 2	3	106	- 3,154
40-44 .....	- 1,408	- 1	- 2	14	15	12	4	13	- 17	8	-	46	- 1,362
45-49 .....	- 1,104	2	1	6	- 1	- 23	- 21	- 36	- 82	- 5	-	- 159	- 1,263
50-54 .....	- 667	1	- 1	- 17	3	- 8	- 142	- 230	- 66	- 25	-	- 485	- 1,152
55-59 .....	- 177	- 1	- 2	- 11	- 9	- 43	- 144	- 101	- 11	- 12	19	- 315	- 492
60-64 .....	- 34	- 3	- 3	15	- 4	- 34	- 181	- 140	- 13	- 13	17	- 359	- 393
65-69 .....	90	- 4	- 13	- 32	- 5	- 30	- 225	116	- 8	- 7	14	- 426	- 336
70+ .....	296	1	2	11	-	54	121	31	3	-	16	239	535

Totals, females, 10+ - 41,825 42 21 177 115 197 451 995 1,108 271 79 3,456 - 38,369

Table A.1 – Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931- 1941, 1941- 1951 and 1951- 1961 – continued

Province and age in 1961	Net migration of in-born	Net migration of out-born by province of birth											All provinces	Net balance of migration
		Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T. and N.W.T.		
		1951- 1961												
Alberta	No.	No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.
Males -														
10- 14 .....	- 5,333	9	40	165	83	213	1,022	898	1,984		995	42	5,451	118
15- 19 .....	- 2,542	28	23	137	73	145	551	490	1,483		429	- 4	3,355	813
20- 24 .....	- 3,563	110	95	315	172	294	1,149	903	2,962		544	16	6,560	2,997
25- 29 .....	- 3,570	62	97	273	198	265	1,238	1,323	3,633		506	5	7,600	4,030
30- 34 .....	- 1,767	1	45	74	54	29	578	943	2,408		197	-	4,329	2,562
35- 39 .....	- 1,697	3	33	104	39	30	462	609	1,217		55	- 8	2,544	847
40- 44 .....	- 141	14	20	90	47	58	325	497	1,002		61	3	2,117	1,976
45- 49 .....	- 202	18	21	65	45	30	179	389	682		20	2	1,451	1,249
50- 54 .....	- 733	1	20	37	6	30	107	137	261		- 62	3	540	- 193
55- 59 .....	- 256	-	- 12	19	2	37	79	123	52		- 18	19	301	45
60- 64 .....	- 81	- 3	5	21	6	33	48	31	11		- 15	21	164	83
65- 69 .....	- 79	- 5	4	- 10	8	47	- 50	- 14	2		- 18	6	- 30	49
70+ .....	253	22	32	53	32	142	367	75	29		17	6	775	1,028
Totals, males, 10+	- 19,553	266	423	1,343	765	1,353	6,055	6,404	15,726		2,711	111	35,157	15,604
Females -														
10- 14 .....	- 5,093	11	31	121	73	161	858	881	1,937		895	30	4,998	- 95
15- 19 .....	- 2,413	17	24	101	47	83	416	494	1,683		357	13	3,235	822
20- 24 .....	- 4,040	37	54	265	146	231	901	925	3,724		711	33	7,027	2,987
25- 29 .....	- 4,652	40	82	296	170	284	1,054	1,224	3,867		521	12	7,550	2,898
30- 34 .....	- 3,053	32	63	180	145	224	837	848	2,219		232	- 6	4,774	1,721
35- 39 .....	- 2,161	19	12	101	83	81	381	498	1,203		19	- 6	2,391	230
40- 44 .....	- 279	14	23	87	37	75	334	397	992		19	- 4	1,974	1,695
45- 49 .....	- 157	-	10	51	25	20	146	284	739		- 3	9	1,281	1,124
50- 54 .....	- 751	- 6	5	16	21	23	51	161	168		- 68	5	388	- 363
55- 59 .....	- 257	- 2	11	- 2	13	1	28	77	121		- 27	6	226	- 31
60- 64 .....	- 132	7	9	6	- 6	28	1	16	45		- 22	2	86	- 46
65- 69 .....	-	6	- 6	12	8	12	- 20	- 17	17		- 10	6	8	8
70+ .....	85	5	43	75	42	132	359	116	73		9	- 2	852	937
Totals, females, 10+	- 22,903	192	361	1,309	804	1,355	5,346	5,904	16,788		2,633	98	34,790	11,887

## British Columbia

## Males -

	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
10-14 .....	- 4,205	15	21	218	91	294	1,360	1,281	2,014	2,412	76	7,782	3,577
15-19 .....	- 1,824	20	21	192	74	174	764	659	1,261	1,194	31	4,390	2,566
20-24 .....	- 2,602	55	34	282	155	255	1,008	828	1,990	1,158	7	5,772	3,170
25-29 .....	- 2,260	58	49	284	171	296	1,050	1,009	2,311	1,310	8	6,546	4,286
30-34 .....	- 1,106	11	30	140	76	215	714	879	1,581	910	11	4,567	3,461
35-39 .....	- 1,629	31	21	172	49	227	475	658	983	206	8	2,830	1,201
40-44 .....	497	35	31	92	92	126	467	657	1,054	368	6	2,928	3,425
45-49 .....	295	19	11	129	44	129	465	676	970	491	- 5	2,925	3,224
50-54 .....	- 521	11	-	134	26	115	320	296	269	80	2	1,253	732
55-59 .....	- 164	17	21	29	6	112	221	151	120	- 13	11	675	511
60-64 .....	- 281	1	33	56	- 1	13	206	107	65	- 48	3	435	154
65-69 .....	67	29	14	65	- 2	27	266	91	48	- 12	11	537	604
70+ .....	615	32	57	190	49	91	726	348	100	39	16	1,648	2,263

## Totals, males, 10+

- 13,118	334	343	1,983	830	2,074	8,042	7,640	12,766	8,095		185	42,292	29,174
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## Females -

	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
10-14 .....	- 4,004	12	26	225	85	276	1,329	1,158	2,068	2,336	74	7,589	3,585
15-19 .....	- 1,697	20	17	136	55	131	545	580	1,171	1,064	48	3,767	2,070
20-24 .....	- 2,968	45	35	233	123	229	834	802	1,721	1,236	22	5,280	2,312
25-29 .....	- 3,264	55	53	301	181	320	1,092	988	2,104	1,299	20	6,413	3,149
30-34 .....	- 2,139	55	40	240	137	273	927	830	1,438	863	22	4,825	2,686
35-39 .....	- 1,749	5	15	96	67	164	456	587	897	173	- 6	2,454	705
40-44 .....	461	21	12	130	61	91	382	619	949	588	4	2,857	3,318
45-49 .....	350	7	21	127	32	62	358	632	944	373	8	2,564	2,914
50-54 .....	- 640	5	4	46	11	76	118	196	353	- 74	- 9	726	86
55-59 .....	- 190	23	24	20	11	35	209	292	176	- 32	9	767	577
60-64 .....	- 202	- 1	9	48	17	43	243	218	96	- 39	8	642	440
65-69 .....	38	18	27	69	26	18	186	226	44	- 7	3	610	648
70+ .....	396	38	67	187	77	138	707	497	143	57	16	1,927	2,323

## Totals, females, 10+

- 15,608	303	350	1,858	883	1,856	7,386	7,625	12,104	7,837		219	40,421	24,813
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Table A.1 - Interprovincial Net Migration of In-born, Net Migration of Out-born by Province of Birth, and Net Balance of Migration, Canadian Born Aged 10 and Over, by Sex and Age, 1931- 1941, 1941- 1951 and 1951- 1961 - concluded

Province and age in 1961	Net migration of in-born	Net migration of out-born by province of birth										All prov- inces	Net balance of migration	
		Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.			Y.T. and N.W.T.
		1951- 1961												
Yukon and Northwest Territories	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	
Males -														
10-14 .....	- 296	- 2	2	13	3	2	- 10	14	11	26	24	83	- 213	
15-19 .....	- 58	-	-	14	5	- 5	- 3	4	16	35	- 1	65	7	
20-24 .....	- 66	33	10	31	28	61	127	84	114	180	83	751	685	
25-29 .....	- 66	13	6	36	28	87	148	54	125	156	50	703	637	
30-34 .....	- 45	4	5	3	7	4	18	29	30	55	3	- 18	- 63	
35-39 .....	- 45	- 1	3	- 7	1	- 1	- 69	- 42	- 50	- 43	- 17	- 226	- 271	
40-44 .....	- 11	1	- 2	- 14	-	- 5	- 35	- 16	- 9	- 34	- 11	- 125	- 136	
45-49 .....	4	3	5	7	- 1	- 15	- 14	- 17	- 3	- 23	- 3	- 75	- 71	
50-54 .....	- 39	- 4	- 2	- 7	5	16	- 20	- 20	5	6	- 6	- 27	- 66	
55-59 .....	- 66	- 2	- 3	- 2	1	- 3	- 33	- 4	- 7	- 2	- 12	- 67	- 133	
60-64 .....	- 62	- 1	- 1	1	- 1	13	- 16	4	-	2	- 3	- 2	- 64	
65-69 .....	- 33	1	- 1	3	- 3	- 5	5	2	- 2	- 2	- 1	- 3	- 36	
70+ .....	- 31	-	- 2	- 7	- 2	- 15	- 15	- 6	-	- 3	- 2	- 52	- 83	
Totals, males, 10+	- 814	45	20	57	71	134	83	86	170	243	98	1,007	193	
Females -														
10-14 .....	- 280	3	4	12	-	1	- 6	1	24	33	24	96	- 184	
15-19 .....	- 99	1	-	7	3	- 1	- 8	- 16	16	15	- 5	12	- 87	
20-24 .....	- 115	6	7	21	15	11	45	31	101	125	33	395	280	
25-29 .....	- 109	11	4	21	19	28	90	48	110	182	63	576	467	
30-34 .....	- 75	3	- 1	23	14	20	70	40	83	62	17	331	256	
35-39 .....	- 62	-	2	13	6	- 6	- 26	8	- 1	- 33	-	- 37	- 99	
40-44 .....	- 5	- 2	3	7	3	1	- 18	4	- 11	- 18	- 3	- 34	- 39	
45-49 .....	- 31	-	1	5	3	- 2	- 8	- 1	- 8	- 8	6	- 12	- 43	
50-54 .....	- 50	- 2	1	- 2	1	- 8	- 5	20	6	- 8	- 1	- 2	- 48	
55-59 .....	- 58	- 1	- 1	4	3	4	5	1	2	- 1	- 4	12	- 46	
60-64 .....	- 54	-	1	1	- 1	- 1	2	3	1	- 5	- 3	- 2	- 56	
65-69 .....	- 38	-	-	- 1	-	- 5	- 4	- 2	- 2	- 3	-	- 11	- 49	
70+ .....	- 38	-	-	1	4	- 5	- 6	- 1	-	1	2	- 4	- 42	
Totals, females, 10+	- 1,014	19	21	112	70	37	131	136	321	348	129	1,324	310	



Table A.2 - Rates of Net Migration of In-born and Out-born and Net Balance of Interprovincial Migration of Canadian Born Aged 10 and Over, by Sex and Age, 1931- 1941, 1941- 1951 and 1951- 1961

(Rate per 1,000 average Canadian-born population of appropriate age and sex)

Sex and age in 1941	Prince Edward Island			Nova Scotia			New Brunswick			Quebec			Ontario		
	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.
1931- 1941															
<b>Males -</b>															
10- 14 .....	- 10	10	-	- 8	14	6	- 18	10	- 8	- 10	6	- 4	- 7	25	18
15- 19 .....	- 14	4	- 9	- 14	14	14	- 14	7	- 7	- 4	8	4	4	26	30
20- 24 .....	- 51	8	- 43	- 17	35	19	- 36	15	- 21	- 11	19	8	-	57	57
25- 29 .....	- 104	15	- 89	- 42	44	2	- 66	18	- 48	- 16	27	11	- 15	74	59
30- 34 .....	- 56	11	- 44	- 17	27	10	- 38	14	- 24	- 6	20	15	6	54	59
35- 39 .....	- 68	- 3	- 71	- 40	18	- 22	- 45	7	- 38	- 14	9	- 5	- 26	26	-
40- 44 .....	- 48	- 7	- 55	- 40	7	- 33	- 42	3	- 45	- 18	3	- 15	- 27	13	- 14
45- 49 .....	- 53	3	- 49	- 43	- 2	- 45	- 28	- 3	- 31	- 12	2	- 10	- 26	7	- 19
50- 54 .....	- 25	- 9	- 33	- 39	4	- 35	- 28	- 8	- 37	- 14	- 1	- 15	- 26	3	- 22
55- 59 .....	51	-	51	50	3	53	62	- 1	61	80	4	84	60	8	68
60- 64 .....	26	- 2	24	38	3	40	47	- 6	41	65	-	65	43	3	46
65- 69 .....	38	11	50	45	6	51	45	4	49	47	-	47	30	3	33
70+ .....	39	2	41	51	3	54	56	3	59	78	2	79	56	5	61
<b>Totals, males, 10+ ..</b>	<b>- 26</b>	<b>5</b>	<b>- 21</b>	<b>- 8</b>	<b>17</b>	<b>9</b>	<b>- 16</b>	<b>7</b>	<b>- 9</b>	<b>2</b>	<b>10</b>	<b>12</b>	<b>2</b>	<b>30</b>	<b>32</b>
<b>Females -</b>															
10- 14 .....	- 17	18	- 8	- 17	16	- 1	- 25	11	- 14	- 13	7	- 6	- 14	26	11
15- 19 .....	- 49	6	- 43	- 16	18	2	- 34	11	- 23	- 10	12	1	- 9	26	17
20- 24 .....	- 154	7	- 147	- 45	40	- 5	- 88	24	- 65	- 15	29	14	- 15	63	48
25- 29 .....	- 132	26	- 106	- 61	36	- 25	- 101	26	- 76	- 20	30	10	- 23	67	44
30- 34 .....	- 65	17	- 49	- 33	30	- 3	- 51	10	- 41	- 12	16	4	- 7	44	37
35- 39 .....	- 81	3	- 78	- 63	15	- 48	- 60	- 1	- 61	- 27	6	- 20	- 45	20	- 25
40- 44 .....	- 41	- 6	- 47	- 57	11	- 46	- 52	-	- 52	- 25	3	- 22	- 41	9	- 32
45- 49 .....	- 28	7	- 36	- 44	1	- 43	- 37	- 8	- 45	- 17	2	- 15	- 32	6	- 26
50- 54 .....	- 24	- 9	- 34	- 51	6	- 45	- 40	- 6	- 47	- 22	1	- 21	- 35	1	- 34
55- 59 .....	60	-	60	61	9	70	59	-	59	85	7	92	73	8	81
60- 64 .....	35	- 5	29	48	4	52	65	6	59	72	5	77	57	5	63
65- 69 .....	39	- 4	35	33	6	40	40	6	46	51	2	52	42	5	47
70+ .....	38	-	38	54	6	60	57	4	61	69	4	73	63	4	66
<b>Totals, females, 10+ ..</b>	<b>- 42</b>	<b>5</b>	<b>- 37</b>	<b>- 20</b>	<b>19</b>	<b>- 1</b>	<b>- 33</b>	<b>9</b>	<b>- 24</b>	<b>- 3</b>	<b>13</b>	<b>9</b>	<b>- 4</b>	<b>28</b>	<b>23</b>

Sex and age in 1941	Manitoba			Saskatchewan			Alberta			British Columbia			Yukon and Northwest Territories		
	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.
1931-1941															
<b>Males -</b>															
10-14 .....	- 46	33	- 14	- 104	- 2	- 107	- 53	23	- 30	- 13	158	145	- 31	6	- 25
15-19 .....	- 38	21	- 17	- 95	- 10	- 105	- 38	22	- 16	- 3	141	139	- 52	34	- 19
20-24 .....	- 90	34	- 56	- 147	- 4	- 152	- 65	41	- 24	- 9	185	176	- 20	271	251
25-29 .....	- 137	37	- 101	- 196	- 20	- 216	- 86	51	- 35	- 25	206	181	- 15	457	443
30-34 .....	- 98	18	- 80	- 125	- 73	- 197	- 55	19	- 35	- 17	200	183	- 25	305	330
35-39 .....	- 86	- 12	- 98	- 98	- 165	- 262	- 81	- 44	- 125	- 71	104	33	- 13	146	133
40-44 .....	- 74	- 26	- 100	- 60	- 182	- 242	- 68	- 64	- 131	- 76	92	16	- 121	8	- 115
45-49 .....	- 52	- 28	- 80	- 33	- 190	- 223	- 46	- 75	- 121	- 80	66	- 13	- 134	117	- 17
50-54 .....	- 52	- 47	- 99	- 19	- 177	- 196	- 30	- 83	- 113	- 68	38	- 30	- 140	67	- 73
55-59 .....	37	9	46	15	50	34	10	39	48	6	125	130	- 81	-	- 81
60-64 .....	31	12	42	13	32	19	8	22	31	- 1	103	102	-	63	63
65-69 .....	30	- 12	18	11	- 49	- 38	4	- 1	2	- 6	127	122	5	- 5	-
70+ .....	32	53	86	24	70	94	20	83	103	24	140	164	32	19	51
<b>Totals, males, 10+ ..</b>	<b>- 65</b>	<b>18</b>	<b>- 47</b>	<b>- 104</b>	<b>- 42</b>	<b>- 146</b>	<b>- 51</b>	<b>18</b>	<b>- 33</b>	<b>- 21</b>	<b>150</b>	<b>129</b>	<b>- 37</b>	<b>145</b>	<b>108</b>
<b>Females -</b>															
10-14 .....	- 56	32	- 24	- 110	- 1	- 112	- 62	24	- 38	- 20	163	143	- 58	4	- 54
15-19 .....	- 46	30	- 16	- 113	- 12	- 124	- 51	21	- 30	- 15	153	138	- 51	- 8	- 59
20-24 .....	- 109	58	- 51	- 217	- 13	- 230	- 89	51	- 38	- 25	228	203	- 22	86	64
25-29 .....	- 149	42	- 106	- 228	- 12	- 240	- 120	51	- 69	- 32	240	209	- 55	277	223
30-34 .....	- 105	18	- 87	- 137	- 49	- 186	- 77	13	- 64	- 39	189	149	- 2	156	158
35-39 .....	- 93	- 13	- 106	- 100	- 126	- 226	- 96	- 43	- 138	- 93	107	14	- 74	18	- 55
40-44 .....	- 71	- 33	- 104	- 63	- 169	- 232	- 89	- 85	- 174	- 102	82	- 20	- 102	- 55	- 157
45-49 .....	- 61	- 51	- 112	- 34	- 180	- 214	- 51	- 90	- 141	- 93	58	- 35	- 118	- 61	- 179
50-54 .....	- 51	- 64	- 115	- 20	- 178	- 198	- 33	- 106	- 140	- 79	61	- 18	- 155	- 26	- 181
55-59 .....	43	6	49	24	48	24	8	35	43	12	158	170	- 60	25	- 35
60-64 .....	32	- 15	17	15	55	40	7	6	13	1	184	186	55	61	6
65-69 .....	24	- 22	1	16	46	30	3	15	18	-	153	153	- 9	131	- 140
70+ .....	35	67	102	25	45	71	29	70	99	29	158	187	97	51	46
<b>Totals, females, 10+ ..</b>	<b>- 75</b>	<b>22</b>	<b>- 53</b>	<b>- 130</b>	<b>- 36</b>	<b>- 167</b>	<b>- 70</b>	<b>17</b>	<b>- 52</b>	<b>- 33</b>	<b>170</b>	<b>137</b>	<b>- 49</b>	<b>44</b>	<b>- 4</b>

Table A.2 - Rates of Net Migration of In-born and Out-born and Net Balance of Interprovincial Migration of Canadian Born Aged 10 and Over, by Sex and Age, 1931-1941, 1941-1951 and 1951-1961 - continued

(Rate per 1,000 average Canadian-born population of appropriate age and sex)

Sex and age in 1951	Prince Edward Island			Nova Scotia			New Brunswick			Quebec			Ontario		
	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.
1941-1951															
<b>Males -</b>															
10-14 .....	- 69	19	- 50	- 51	13	- 38	- 53	19	- 34	- 23	11	- 12	- 26	44	18
15-19 .....	- 138	22	- 116	- 108	58	- 50	- 106	19	- 87	- 29	11	- 18	- 32	69	36
20-24 .....	- 296	63	- 233	- 224	118	- 106	- 226	33	- 193	- 48	20	- 28	- 52	122	70
25-29 .....	- 313	67	- 246	- 230	81	- 149	- 232	42	- 190	- 51	28	- 23	- 70	119	50
30-34 .....	- 258	37	- 221	- 185	40	- 145	- 185	32	- 153	- 49	20	- 30	- 75	80	5
35-39 .....	- 182	16	- 165	- 129	- 1	- 129	- 130	15	- 115	- 42	9	- 33	- 63	41	- 22
40-44 .....	- 91	-	- 91	- 51	- 1	- 50	- 54	11	- 43	- 14	4	- 10	- 13	32	19
45-49 .....	- 16	5	- 11	-	7	7	- 6	12	6	6	5	11	20	27	47
50-54 .....	11	-	11	39	7	45	5	3	9	21	11	32	43	22	65
55-59 .....	32	- 4	28	57	8	65	24	10	34	26	5	31	54	15	69
60-64 .....	45	8	53	64	5	68	54	7	60	33	3	36	52	12	64
65-69 .....	12	- 2	11	67	9	76	52	7	60	30	7	37	45	12	57
70+ .....	- 26	- 3	- 29	- 28	1	- 26	- 26	- 1	- 26	- 45	-	- 44	- 39	2	- 38
<b>Totals, males, 10+ ..</b>	<b>- 122</b>	<b>21</b>	<b>- 101</b>	<b>- 88</b>	<b>33</b>	<b>- 55</b>	<b>- 93</b>	<b>19</b>	<b>- 74</b>	<b>- 25</b>	<b>12</b>	<b>- 12</b>	<b>- 27</b>	<b>56</b>	<b>29</b>
<b>Females -</b>															
10-14 .....	- 68	15	- 53	- 51	15	- 36	- 60	22	- 38	- 23	12	- 11	- 27	44	17
15-19 .....	- 127	7	- 120	- 73	18	- 54	- 87	26	- 61	- 22	12	- 11	- 24	53	28
20-24 .....	- 313	38	- 274	- 183	39	- 144	- 188	45	- 143	- 29	27	- 1	- 43	93	49
25-29 .....	- 362	68	- 294	- 271	51	- 220	- 243	47	- 195	- 43	33	- 10	- 78	118	39
30-34 .....	- 225	39	- 186	- 200	13	- 187	- 177	28	- 150	- 46	19	- 27	- 85	73	- 12
35-39 .....	- 160	7	- 153	- 137	1	- 136	- 116	10	- 106	- 45	4	- 41	- 76	39	- 37
40-44 .....	- 61	-	- 61	- 50	3	- 47	- 50	11	- 39	- 8	4	- 3	- 18	29	11
45-49 .....	8	9	17	6	23	6	6	6	-	15	5	21	33	24	57
50-54 .....	33	3	37	46	5	52	24	4	28	29	6	35	51	20	71
55-59 .....	39	4	43	50	11	61	29	6	35	28	3	31	54	15	69
60-64 .....	20	8	28	45	2	47	35	6	42	19	3	21	44	13	57
65-69 .....	- 1	- 3	- 4	12	3	16	3	- 3	-	13	4	- 9	10	11	21
70+ .....	- 47	- 1	- 48	- 55	3	- 52	- 56	3	- 54	- 68	2	- 66	- 51	3	- 48
<b>Totals, females, 10+ ..</b>	<b>- 121</b>	<b>17</b>	<b>- 103</b>	<b>- 91</b>	<b>16</b>	<b>- 76</b>	<b>- 93</b>	<b>21</b>	<b>- 72</b>	<b>- 23</b>	<b>13</b>	<b>- 10</b>	<b>- 30</b>	<b>49</b>	<b>19</b>

Sex and age in 1951	Manitoba			Saskatchewan			Alberta			British Columbia			Yukon and Northwest Territories		
	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.
1941-1951															
<b>Males -</b>															
10-14 .....	- 117	48	- 69	- 184	21	- 163	- 99	81	- 19	- 43	273	230	- 85	60	- 25
15-19 .....	- 122	44	- 78	- 218	11	- 207	- 103	103	-	- 53	299	247	- 80	154	74
20-24 .....	- 193	79	- 114	- 329	19	- 310	- 142	173	31	- 81	366	285	- 48	764	715
25-29 .....	- 223	66	- 156	- 346	11	- 334	- 160	161	2	- 102	359	257	- 54	796	742
30-34 .....	- 189	33	- 156	- 302	- 10	- 313	- 140	116	- 23	- 100	320	219	- 80	469	389
35-39 .....	- 140	6	- 135	- 208	- 22	- 230	- 108	72	- 36	- 72	235	163	- 92	162	70
40-44 .....	- 82	- 2	- 83	- 99	- 45	- 144	- 55	55	-	- 38	228	190	- 57	110	53
45-49 .....	- 31	- 7	- 24	- 12	- 55	- 67	- 1	51	50	- 15	228	214	- 101	109	8
50-54 .....	5	- 1	4	39	- 74	- 35	25	38	63	11	220	232	- 34	66	31
55-59 .....	38	- 2	37	48	- 69	- 20	33	41	74	23	233	256	- 43	- 82	- 125
60-64 .....	43	- 7	36	35	- 80	- 45	22	39	61	13	242	255	- 23	11	- 11
65-69 .....	25	- 29	- 4	21	- 111	- 91	9	- 26	- 17	- 2	263	265	- 65	- 39	- 104
70+ .....	- 8	- 57	- 65	- 2	- 76	- 78	- 13	- 34	- 48	- 36	114	79	- 140	- 155	- 295
<b>Totals, males, 10+ ..</b>	<b>- 121</b>	<b>30</b>	<b>- 91</b>	<b>- 201</b>	<b>- 12</b>	<b>- 213</b>	<b>- 97</b>	<b>97</b>	<b>-</b>	<b>- 57</b>	<b>279</b>	<b>222</b>	<b>- 72</b>	<b>296</b>	<b>224</b>
<b>Females -</b>															
10-14 .....	- 116	47	- 68	- 187	21	- 166	- 101	81	- 20	- 46	273	227	- 95	49	- 45
15-19 .....	- 107	50	- 57	- 222	9	- 213	- 104	81	- 24	- 47	300	253	- 81	26	- 54
20-24 .....	- 173	90	- 83	- 357	15	- 342	- 150	137	- 13	- 78	359	281	- 76	299	223
25-29 .....	- 250	83	- 167	- 425	24	- 402	- 199	161	- 39	- 121	408	287	- 94	568	474
30-34 .....	- 224	23	- 201	- 322	5	- 317	- 159	107	- 52	- 103	322	219	- 153	438	285
35-39 .....	- 161	2	- 160	- 226	- 24	- 249	- 125	68	- 57	- 89	227	138	- 123	170	47
40-44 .....	- 95	- 1	- 96	- 117	- 41	- 158	- 66	47	- 19	- 49	225	176	- 92	26	- 67
45-49 .....	25	1	24	- 20	- 63	- 84	- 11	39	29	- 20	245	225	- 97	18	- 79
50-54 .....	11	3	14	26	- 69	- 43	14	42	56	- 1	242	241	- 54	3	- 48
55-59 .....	20	7	27	36	- 87	- 50	13	17	31	- 3	236	234	- 80	66	- 9
60-64 .....	- 20	- 19	1	22	- 138	- 116	3	26	- 29	- 8	262	255	- 118	- 12	- 124
65-69 .....	- 10	- 43	- 53	10	- 153	- 143	4	- 53	- 57	- 37	237	199	- 188	- 53	- 248
70+ .....	- 19	- 72	- 91	- 11	- 107	- 118	- 26	- 6	- 32	- 61	105	43	- 264	- 43	- 307
<b>Totals, females, 10+</b>	<b>- 131</b>	<b>32</b>	<b>- 99</b>	<b>- 230</b>	<b>- 11</b>	<b>- 241</b>	<b>- 114</b>	<b>89</b>	<b>- 25</b>	<b>- 67</b>	<b>287</b>	<b>220</b>	<b>- 106</b>	<b>180</b>	<b>74</b>

Table A.2 – Rates of Net Migration of In-born and Out-born and Net Balance of Interprovincial Migration of Canadian Born Aged 10 and Over, by Sex and Age, 1931- 1941, 1941- 1951 and 1951- 1961 – concluded

(Rate per 1,000 average Canadian-born population of appropriate age and sex)

Sex and age in 1961	Newfoundland			Prince Edward Island			Nova Scotia			New Brunswick			Quebec		
	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.
1951- 1961															
<b>Males –</b>															
10- 14 .....	- 42	7	- 35	- 113	10	- 103	- 99	30	- 69	- 83	35	- 49	- 22	14	- 8
15- 19 .....	- 45	5	- 41	- 106	- 4	- 110	- 100	60	- 40	- 83	34	- 50	- 17	9	- 8
20- 24 .....	- 146	31	- 115	- 336	62	- 275	- 235	157	- 78	- 253	78	- 174	- 40	25	- 15
25- 29 .....	- 133	38	- 95	- 380	66	- 314	- 250	82	- 167	- 287	81	- 206	- 47	31	- 16
30- 34 .....	- 51	17	- 34	- 203	- 33	- 237	- 106	- 20	- 125	- 135	53	- 82	- 26	19	- 7
35- 39 .....	- 57	9	- 48	- 108	- 40	- 148	- 88	- 11	- 99	- 88	27	- 62	- 19	8	- 11
40- 44 .....	11	8	19	- 57	- 25	- 82	- 28	- 4	- 32	- 44	18	- 26	- 16	8	- 8
45- 49 .....	- 16	3	19	- 22	5	- 28	- 12	- 4	- 15	- 22	6	- 15	- 18	3	- 14
50- 54 .....	- 12	2	- 10	- 35	- 5	- 40	- 31	- 6	- 37	- 34	- 1	- 35	- 6	1	- 5
55- 59 .....	- 16	3	- 13	- 7	1	- 6	- 10	- 3	- 13	- 2	-	- 2	16	1	15
60- 64 .....	- 11	- 2	- 13	31	6	37	3	3	5	12	- 1	11	9	- 7	2
65- 69 .....	3	- 2	1	34	4	38	16	- 9	7	25	3	28	8	- 5	3
70+ .....	11	- 2	9	19	1	20	18	2	20	13	4	18	21	- 1	22
<b>Totals, males, 10+ ..</b>	<b>- 45</b>	<b>11</b>	<b>- 34</b>	<b>- 112</b>	<b>5</b>	<b>- 107</b>	<b>- 85</b>	<b>29</b>	<b>- 56</b>	<b>- 90</b>	<b>31</b>	<b>- 59</b>	<b>- 18</b>	<b>11</b>	<b>- 6</b>
<b>Females –</b>															
10- 14 .....	- 39	8	- 31	- 114	10	- 104	- 98	28	- 70	- 85	35	- 50	- 21	13	- 9
15- 19 .....	- 49	2	- 46	- 128	- 5	- 133	- 95	22	- 73	- 95	22	- 72	- 16	11	- 5
20- 24 .....	- 129	20	- 109	- 391	45	- 347	- 239	67	- 172	- 258	61	- 197	- 37	31	- 6
25- 29 .....	- 162	30	- 132	- 465	61	- 404	- 285	74	- 211	- 304	63	- 241	- 55	35	- 20
30- 34 .....	- 95	18	- 77	- 268	21	- 247	- 167	38	- 130	- 175	36	- 139	- 42	17	- 25
35- 39 .....	- 66	5	- 62	- 123	- 23	- 146	- 101	8	- 93	- 103	17	- 86	- 28	7	- 20
40- 44 .....	7	- 8	8	- 34	- 12	- 45	- 17	4	- 12	- 33	17	- 16	- 16	2	- 14
45- 49 .....	10	3	13	- 18	- 3	- 21	- 12	1	- 11	- 22	4	- 18	- 9	4	- 5
50- 54 .....	- 33	4	- 29	- 23	- 1	- 24	- 38	- 7	- 45	- 39	- 1	- 40	- 6	-	- 7
55- 59 .....	- 24	2	- 21	- 22	5	- 17	- 7	-	- 7	1	1	2	10	- 1	9
60- 64 .....	- 17	- 1	- 18	- 6	- 2	- 8	- 8	- 2	- 9	- 2	-	- 1	-	- 1	1
65- 69 .....	- 29	- 1	- 30	- 2	- 1	- 2	9	2	11	- 4	-	- 3	- 3	-	3
70+ .....	- 18	-	- 18	-	2	3	11	5	16	15	5	20	28	3	31
<b>Totals, females, 10+ ..</b>	<b>- 56</b>	<b>8</b>	<b>- 48</b>	<b>- 134</b>	<b>9</b>	<b>- 125</b>	<b>- 93</b>	<b>23</b>	<b>- 71</b>	<b>- 100</b>	<b>25</b>	<b>- 75</b>	<b>- 20</b>	<b>12</b>	<b>- 8</b>

Sex and age in 1961	Ontario			Manitoba			Saskatchewan			Alberta			British Columbia			Yukon and Northwest Territories		
	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.	In- born	Out- born	Net bal.
1951-1961																		
Males -																		
10-14 .....	-45	42	-2	-114	50	-63	-133	30	-103	-90	92	2	-64	118	54	-160	45	-115
15-19 .....	-29	42	13	-70	32	-38	-110	12	-98	-56	74	18	-37	89	52	-46	51	5
20-24 .....	-63	91	28	-132	95	-37	-246	39	-207	-94	173	79	-67	148	81	-50	568	518
25-29 .....	-63	88	26	-175	97	-78	-292	46	-246	-94	199	106	-62	180	118	-52	552	500
30-34 .....	-33	31	-2	-121	34	-87	-168	25	-143	-48	117	69	-28	118	89	-30	-12	-42
35-39 .....	-42	17	-25	-99	16	-82	-119	3	-115	-51	77	26	-42	72	31	-35	-175	-210
40-44 .....	7	21	28	-36	11	-25	-65	2	-63	-4	67	63	13	78	91	-10	-114	-124
45-49 .....	9	15	24	-32	6	-26	-41	-5	-45	-7	53	46	8	78	86	5	-89	-84
50-54 .....	-20	6	-14	-31	-4	-35	-38	-22	-59	-42	31	-11	-22	52	31	-62	-43	-106
55-59 .....	-7	3	-4	-12	-10	-22	-7	-36	-43	-25	29	4	-11	46	35	-163	-165	-328
60-64 .....	-15	-	-15	-6	-7	-13	-	-40	-39	-12	24	12	-26	40	14	-209	-7	-215
65-69 .....	-	-	-	8	-23	-15	24	-46	-22	15	-6	9	8	62	70	-176	-16	-191
70+ .....	8	4	12	38	-27	11	28	17	-44	19	59	78	28	75	103	-77	-129	-205
Totals, males, 10+ ..	-27	34	7	-80	33	-47	-123	14	-109	-54	97	43	-31	100	69	-66	81	16
Females -																		
10-14 .....	-45	42	-2	-106	54	-52	-135	29	-106	-89	87	-2	-63	120	56	-156	53	-102
15-19 .....	-30	41	11	-75	32	-43	-125	8	-117	-55	74	19	-36	80	44	-83	11	-72
20-24 .....	-61	94	33	-156	93	-63	-290	30	-261	-107	186	79	-77	138	60	-103	354	251
25-29 .....	-85	104	19	-226	86	-140	-342	48	-294	-127	207	79	-92	180	89	-100	528	428
30-34 .....	-58	57	-1	-154	24	-130	-199	29	-170	-87	136	49	-55	124	69	-74	324	250
35-39 .....	-49	27	-22	-107	-	-107	-124	4	-120	-67	74	7	-43	60	17	-65	-39	-104
40-44 .....	15	24	39	-29	7	-22	-54	2	-53	-9	65	55	11	71	82	-7	-44	-51
45-49 .....	14	20	34	-23	2	-21	-48	7	-54	-6	50	44	9	68	77	-50	-18	-67
50-54 .....	-24	12	-12	-33	-10	-42	-44	-32	-76	-49	25	-23	-28	31	4	-123	5	-118
55-59 .....	-8	8	-	-26	-5	-31	-19	-34	-54	-28	25	-3	-14	55	42	-211	40	-171
60-64 .....	-12	7	-5	-19	-21	-40	-5	-37	-62	-23	15	-8	-19	61	42	-234	-4	-238
65-69 .....	-5	5	-	-3	-36	-40	17	-80	-63	-	2	2	4	68	72	-229	-66	-295
70+ .....	8	8	16	39	-25	13	25	20	-46	8	77	85	19	91	110	-131	-7	-138
Totals, females, 10+	-30	40	9	-90	28	-62	-142	12	-130	-66	101	34	-37	96	59	-102	134	32

SOURCE: Table A.1.

Table A.3 - Interprovincial In-, Out-, and Net Migration by Sex and Age, and by Province, 1956-1961

Sex and age in 1961	Newfoundland			Prince Edward Island			Nova Scotia			New Brunswick		
	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
<b>Males -</b>												
5- 9 .....	534	752	- 218	479	394	- 85	2,146	3,009	- 863	2,287	2,163	124
10-14 .....	364	549	- 185	256	311	- 55	1,445	2,019	- 574	1,518	1,441	77
15-19 .....	178	352	- 174	95	288	- 193	713	1,363	- 650	596	1,258	- 662
20-24 .....	285	934	- 649	275	610	- 335	1,788	3,359	- 1,571	1,211	2,423	- 1,212
25-29 .....	520	828	- 308	341	337	4	1,901	3,461	- 1,560	1,883	2,223	- 340
30-34 .....	372	685	- 313	333	259	74	1,641	2,228	- 587	1,532	1,414	118
35-39 .....	324	540	- 216	249	179	70	1,217	1,849	- 632	1,363	1,229	134
40-44 .....	238	364	- 126	119	190	- 71	862	1,279	- 417	761	831	- 70
45-49 .....	141	136	5	114	119	- 5	451	726	- 275	460	564	- 104
50-54 .....	40	158	- 118	60	53	7	279	328	- 49	269	338	- 69
55-59 .....	46	37	9	67	43	24	120	219	- 99	138	216	- 78
60-64 .....	20	42	- 22	26	21	5	86	153	- 67	96	95	1
65+ .....	46	114	- 68	94	53	41	328	286	42	173	304	- 131
<b>Totals, males, 5+ ...</b>	<b>3,108</b>	<b>5,491</b>	<b>- 2,383</b>	<b>2,508</b>	<b>2,857</b>	<b>- 349</b>	<b>12,977</b>	<b>20,279</b>	<b>- 7,302</b>	<b>12,287</b>	<b>14,499</b>	<b>- 2,212</b>
<b>Females -</b>												
5- 9 .....	588	777	- 189	419	330	- 89	2,018	3,066	- 1,048	2,224	2,073	151
10-14 .....	343	520	- 177	251	268	- 17	1,265	1,977	- 712	1,428	1,269	159
15-19 .....	165	494	- 329	136	329	- 193	787	1,752	- 965	792	1,438	- 646
20-24 .....	273	963	- 690	284	813	- 529	1,759	3,570	- 1,811	1,438	3,078	- 1,640
25-29 .....	424	671	- 247	389	380	9	1,796	2,888	- 1,092	1,758	2,254	- 496
30-34 .....	356	533	- 177	273	259	14	1,498	2,198	- 700	1,417	1,369	48
35-39 .....	305	446	- 141	238	210	28	1,146	1,621	- 475	1,059	1,093	- 34
40-44 .....	157	235	- 78	100	181	- 81	549	1,007	- 458	675	757	- 82
45-49 .....	95	145	- 50	83	115	- 32	383	617	- 234	306	481	- 175
50-54 .....	77	112	- 35	48	73	- 25	161	403	- 242	193	343	- 150
55-59 .....	20	74	- 54	14	32	- 18	236	202	34	133	243	- 110
60-64 .....	15	77	- 62	20	37	- 17	112	203	- 91	66	193	- 127
65+ .....	73	134	- 61	114	92	22	368	549	- 181	451	407	44
<b>Totals, females, 5+ ..</b>	<b>2,891</b>	<b>5,181</b>	<b>- 2,290</b>	<b>2,369</b>	<b>3,119</b>	<b>- 750</b>	<b>12,078</b>	<b>20,053</b>	<b>- 7,975</b>	<b>11,940</b>	<b>14,998</b>	<b>- 3,058</b>

Sex and age in 1961	Quebec			Ontario			Manitoba			Saskatchewan		
	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
<b>Males -</b>												
5- 9 .....	5,420	5,642	- 222	11,052	9,649	1,403	3,387	4,227	- 840	2,748	4,726	- 1,978
10- 14 .....	3,270	3,822	- 552	7,579	5,953	1,626	2,195	3,187	- 992	1,628	3,337	- 1,709
15- 19 .....	2,055	2,489	- 434	5,180	3,026	2,154	1,328	1,655	- 327	786	2,512	- 1,726
20- 24 .....	3,153	3,272	- 119	8,634	5,744	2,890	2,219	2,557	- 338	1,779	3,844	- 2,065
25- 29 .....	4,825	4,877	- 52	10,914	8,568	2,346	2,703	3,977	- 1,274	2,469	4,276	- 1,807
30- 34 .....	4,489	4,501	- 12	8,835	8,082	753	2,854	3,519	- 665	2,394	3,704	- 1,310
35- 39 .....	3,677	4,076	- 399	7,841	6,290	1,551	2,033	2,879	- 846	1,709	2,929	- 1,220
40- 44 .....	2,540	2,688	- 148	5,459	4,386	1,073	1,477	2,025	- 548	970	2,144	- 1,174
45- 49 .....	1,641	1,932	- 291	3,577	2,960	617	1,076	1,394	- 318	731	1,554	- 823
50- 54 .....	853	1,171	- 318	2,028	1,683	345	636	819	- 183	475	949	- 474
55- 59 .....	637	697	- 60	1,244	1,071	173	316	530	- 214	295	778	- 483
60- 64 .....	330	529	- 199	858	667	191	279	465	- 186	139	574	- 435
65+ .....	720	1,208	- 488	2,104	1,497	607	535	1,292	- 757	528	1,671	- 1,143
<b>Totals, males, 5+ ...</b>	<b>33,610</b>	<b>36,904</b>	<b>- 3,294</b>	<b>75,305</b>	<b>59,576</b>	<b>15,729</b>	<b>21,038</b>	<b>28,526</b>	<b>- 7,488</b>	<b>16,651</b>	<b>32,998</b>	<b>- 16,347</b>
<b>Females -</b>												
5- 9 .....	5,195	5,622	- 427	11,179	8,924	2,255	3,091	4,427	- 1,336	2,639	4,586	- 1,947
10- 14 .....	3,005	3,745	- 740	7,340	5,499	1,841	2,147	2,970	- 823	1,595	3,025	- 1,430
15- 19 .....	2,243	2,706	- 463	5,934	3,507	2,427	1,500	1,908	- 408	1,049	2,671	- 1,622
20- 24 .....	4,282	4,283	- 1	10,601	6,159	4,442	2,598	3,377	- 779	2,038	5,310	- 3,272
25- 29 .....	4,825	4,956	- 131	9,805	8,423	1,382	2,731	3,922	- 1,191	2,195	4,246	- 2,051
30- 34 .....	3,800	4,376	- 576	8,195	7,103	1,092	2,380	3,121	- 741	1,872	3,239	- 1,367
35- 39 .....	3,375	3,658	- 283	7,099	5,883	1,216	1,791	2,784	- 993	1,404	2,637	- 1,233
40- 44 .....	2,038	2,358	- 320	4,684	3,430	1,254	1,322	1,759	- 437	930	1,937	- 1,007
45- 49 .....	1,289	1,676	- 387	3,083	2,384	699	865	1,295	- 430	628	1,302	- 674
50- 54 .....	682	1,010	- 328	2,043	1,329	714	499	861	- 362	290	1,024	- 734
55- 59 .....	713	819	- 106	1,229	1,074	155	285	521	- 236	228	733	- 505
60- 64 .....	471	637	- 166	1,074	770	304	303	519	- 216	210	734	- 524
65+ .....	981	1,515	- 534	2,664	1,900	764	701	1,218	- 517	657	1,521	- 864
<b>Totals, females, 5+ ..</b>	<b>32,899</b>	<b>37,361</b>	<b>- 4,462</b>	<b>74,930</b>	<b>56,385</b>	<b>18,545</b>	<b>20,213</b>	<b>28,682</b>	<b>- 8,469</b>	<b>15,735</b>	<b>32,965</b>	<b>- 17,230</b>

Table A.3 - Interprovincial In-, Out-, and Net Migration by Sex and Age, and by Province, 1956-1961 - concluded

Sex and age in 1961	Alberta			British Columbia			Yukon and Northwest Territories			Canada		
	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
<b>Males -</b>												
5- 9 .....	5,972	5,195	777	6,047	4,189	1,858	519	645	- 126	40,591	40,591	-
10- 14 .....	3,901	3,264	637	4,385	2,684	1,701	348	322	26	26,889	26,889	-
15- 19 .....	2,498	1,843	655	2,892	1,539	1,353	174	170	4	16,495	16,495	-
20- 24 .....	4,824	2,711	2,113	3,798	2,663	1,135	384	233	151	28,350	28,350	-
25- 29 .....	6,200	4,102	2,098	5,192	4,157	1,035	490	632	- 142	37,438	37,438	-
30- 34 .....	5,104	4,110	994	4,873	3,628	1,245	389	686	- 297	32,816	32,816	-
35- 39 .....	3,919	3,304	615	3,955	2,858	1,097	347	501	- 154	26,634	26,634	-
40- 44 .....	2,706	2,121	585	3,011	2,050	961	258	323	- 65	18,401	18,401	-
45- 49 .....	1,863	1,567	296	2,318	1,376	942	117	161	- 44	12,489	12,489	-
50- 54 .....	1,066	1,131	- 65	1,753	841	912	93	81	12	7,552	7,552	-
55- 59 .....	774	682	92	1,097	468	629	73	66	7	4,807	4,807	-
60- 64 .....	474	433	41	1,065	411	654	38	21	17	3,411	3,411	-
65+ .....	977	1,228	- 251	3,094	920	2,174	16	42	- 26	8,615	8,615	-
<b>Totals, males, 5+ ...</b>	<b>40,278</b>	<b>31,691</b>	<b>8,587</b>	<b>43,480</b>	<b>27,784</b>	<b>15,696</b>	<b>3,246</b>	<b>3,883</b>	<b>- 637</b>	<b>264,488</b>	<b>264,488</b>	<b>-</b>
<b>Females -</b>												
5- 9 .....	5,652	4,976	676	5,882	3,854	2,028	466	718	- 252	39,353	39,353	-
10- 14 .....	3,632	3,210	422	4,300	2,734	1,566	283	372	- 89	25,589	25,589	-
15- 19 .....	2,870	2,128	742	3,125	1,596	1,529	142	214	- 72	18,743	18,743	-
20- 24 .....	6,148	3,456	2,692	4,543	3,258	1,285	427	124	303	34,391	34,391	-
25- 29 .....	6,090	4,069	2,021	5,263	3,634	1,629	513	346	167	35,789	35,789	-
30- 34 .....	4,468	3,585	883	4,529	2,925	1,604	382	462	- 80	29,170	29,170	-
35- 39 .....	3,465	2,949	516	3,968	2,541	1,427	315	343	- 28	24,165	24,165	-
40- 44 .....	2,217	1,942	275	2,763	1,827	936	195	197	- 2	15,630	15,630	-
45- 49 .....	1,319	1,360	- 41	2,371	1,065	1,306	99	81	18	10,521	10,521	-
50- 54 .....	1,049	914	135	1,656	642	1,014	59	46	13	6,757	6,757	-
55- 59 .....	661	571	90	1,244	490	754	37	41	- 4	4,800	4,800	-
60- 64 .....	518	647	- 129	1,445	400	1,045	20	37	- 17	4,254	4,254	-
65+ .....	1,131	1,213	- 82	2,789	1,378	1,411	30	32	- 2	9,959	9,959	-
<b>Totals, females, 5+ ..</b>	<b>39,220</b>	<b>31,020</b>	<b>8,200</b>	<b>43,878</b>	<b>26,344</b>	<b>17,534</b>	<b>2,968</b>	<b>3,013</b>	<b>- 45</b>	<b>259,121</b>	<b>259,121</b>	<b>-</b>

SOURCE: 1961 Census unpublished migration tabulations, Table 6.

## ***Appendix B***



## PLACE-OF-BIRTH SURVIVAL RATIO METHOD FOR ESTIMATING INTERCENSAL NET MIGRATION BETWEEN PROVINCES

The estimates of intercensal net migration made here are for the 10 provinces of Canada for 1931-1941, 1941-1951, and for the 11 provinces of Canada for 1951-1961 (Newfoundland was excluded before 1951 and the Yukon and Northwest Territories were taken as one province). The data required for the application of the place-of-birth survival ratio method, and the adjustment of the data to meet the necessary conditions are discussed in Chapter Three, Section 3.1. More specifically, the data required for the estimation of intercensal net migration in terms of eleven provinces are: (1) ten-year place-of-birth survival ratios for each of the 11 provinces, in five-year age groups, by sex, for an intercensal period; (2) resident population of each of the 11 provinces classified by province of birth, by sex, and five-year age groups in the first census; and (3) resident population of each of the 11 provinces classified by province of birth, by sex, and five-year age groups (aged 10 years and over) in the second census.

### METHOD

The methodology used here was originally developed for application of the United States data (mostly 10-year age groups) for nine regions for the period 1950-1960 (Eldridge and Kim, 1968, pp. 4-10 and pp. 100-104). It is as follows. Apply the 10-year place-of-birth survival ratios to the population born in each province and living in each of the eleven provinces (in-born population) in the first census, including the province of birth and obtain the corresponding expected population by sex and age for each province in the second census. The differences between the expected population and the corresponding enumerated population in the second census are the estimates of net change due to the intercensal migration of the in-born population of the province with respect to each of the 11 provinces. By repeating this operation for each province, net change due to migration of in-born population of each province can be estimated for that province and for each of the other 10 provinces. From these, the intercensal net migration of in-born (mostly net out-migration) and the net migration of out-born (mostly net in-migration) can be accumulated for each province. The sum of the net migration of in-born and out-born represents the net balance of migration for the province concerned.

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The various steps involved in the estimation of net migration for 1951-1961 by five-year age groups for each of the 11 provinces of Canada are explained here for illustration of the method. The calculation is made for each sex separately. Newfoundland is chosen as an example for the illustration.

**Table I - Population Residing in Each Province, by Province of Birth and Age, 1951**  
**Newfoundland**

Province of birth	Five-year age groups				
	0-4	5-9	10-14	60+	All ages
Nfld. ....					
P.E.I. ....					
N.S. ....					
N.B. ....					
Que. ....					
Ont. ....					
Man. ....					
Sask. ....					
Alta. ....					
B.C. ....					
Y.T. and N.W.T. ....					
All provinces ....					

**Table II. - Population Residing in Each Province, by Province of Birth and Age, 1961**

The layout of Table II will be similar to that of Table I, the only difference being in the age groups. Unlike Table I, the five-year age groups will be from age 10 and the terminal age interval will be 70+.

There will be one table for each province in 1951 and 1961 (males and females separately) as shown above. Thus the matrix size of the table for each year will be:  $143 \times 11$  (for 11 provinces and 13 age groups).

# **B.1. DERIVATION OF IN-BORN POPULATION OF EACH PROVINCE BY PROVINCE OF RESIDENCE AND CALCULATION OF SURVIVAL RATIOS**

Rearrange the basic data of Tables I and II and prepare Tables III and IV. This is to be done by accumulating the in-born population of each province by sex for 1951 and 1961. The rearrangement will yield 11 tables for 1951 and 11 tables for 1961. The accumulation of each line for 1951 and 1961 separately will provide the data for each province. Thus, line 1 of each province for Newfoundland, line 2 for Prince Edward Island, etc.

**Table III – In-born Population of Each Province, by Province of Residence, 1951**  
**Newfoundland**

Province of residence	Five-year age groups				
	0-4	5-9	10-14	60+	All ages
Nfld. ....					
P.E.I. ....					
N.S. ....					
N.B. ....					
Que. ....					
Ont. ....					
Man. ....					
Sask. ....					
Alta. ....					
B.C. ....					
Y.T. and N.W.T. ...					
All provinces ....					

SOURCE: Line 1 of Table I of each province for Nfld.  
Line 2 of Table I of each province for P.E.I., etc.

**Table IV. – In-born Population of Each Province, by Province of Residence, 1961**

The layout of Table IV and the procedure for deriving it are the same as for Table III; data are to be derived from Table II.

If expressed symbolically, the total in-born population aged  $x$  for province 1, say Newfoundland, by province of residence in 1951 (Table III) will be:

$$P_{ij}(x, 51) = \begin{bmatrix} P_{1,1}(x_{0-4}, 51) & P_{1,1}(x_{5-9}, 51) & \dots & P_{1,1}(x_{60+}, 51) \\ P_{1,2}(x_{0-4}, 51) & P_{1,2}(x_{5-9}, 51) & \dots & P_{1,2}(x_{60+}, 51) \\ \cdot & \cdot & & \cdot \\ \cdot & \cdot & & \cdot \\ \cdot & \cdot & & \cdot \\ P_{1,11}(x_{0-4}, 51) & P_{1,11}(x_{5-9}, 51) & \dots & P_{1,11}(x_{60+}, 51) \end{bmatrix}$$

Where  $P$  = total population

$p$  = population in an age-group for a census  
having a common area of birth and area of residence

$i$  = province of birth ( $i = 1, 2 \dots 11$ )

$j$  = province of residence ( $j = 1, 2 \dots 11$ )

$x$  = age in 1951

The birth cohorts  $n$  years later in 1961,  $P_{ij}(x + n, 61)$  will substitute a similar matrix with age groups  $n$  years older ( $n = 10$ ).

The formula for the calculation of province-specific survival ratios

$S_{i(x \text{ to } x + n)}$  is:

$$S_{i(x \text{ to } x + n)} = \frac{\sum_{j=1}^{11} p_{ij}(x + n, 61)}{\sum_{j=1}^{11} p_{ij}(x, 51)} \quad [1]$$

In this operation, the row sums of the matrix for each province in 1961 are divided by the row sums of the matrix for the corresponding province in 1951. Thus, the province-specific survival ratio for the age groups 0-4 to 10-14,

$$S_{i(0-4 \text{ to } 10-14)} = \frac{\text{population aged 10-14 in 1961 born in province } i}{\text{population aged 0-4 in 1951 born in province } i}$$

This process is to be repeated for each age group for each province in order to obtain the complete set of province-specific survival ratios.

## B.2 CALCULATION OF EXPECTED POPULATION, 1961

Multiply the appropriate province-specific ten-year survival ratios by each number in Table III and record the results in Table V. For example, multiply survival ratio 0-4 to 10-14 for Newfoundland by the 0-4 population for Newfoundland in 1951 and obtain the expected population in the 10-14 age group in 1961; multiply survival ratio 5-9 to 15-19 for Newfoundland by the population in the age group 5-9 for Newfoundland in 1951

and obtain the expected population in 15-19 age group in 1961, etc. Repeat the same operation for each province and thus form Table V. The matrix of expected population,  ${}^E p_{ij}(x+n, 61)$  is obtained by multiplying the rows of the matrix for 1951 by the corresponding matrix of survival ratios. Thus,

$${}^E p_{ij}(x+n, 61) = S_i \cdot p_{ij}(x, 51) \quad [2]$$

**Table V – Expected In-born Population, by Province of Residence, 1961  
Newfoundland**

Province of expected residence in 1961	Five-year age groups in 1961				
	10-14	15-19	20-24	70+	Total 10+
Nfld. ....	Obtained by multiplying the population in Table III by the appropriate 10-year survival ratios.				
P.E.I. ....					
N.S. ....					
N.B. ....					
Que. ....					
Ont. ....					
Man. ....					
Sask. ....					
Alta. ....					
B.C. ....					
Y.T. and N.W.T. ..					
All provinces ...					

### B.3 CALCULATION OF NET MIGRATION

Subtract the 1961 "expected" population in Table V from the corresponding enumerated in-born population by province of residence in 1961 presented in Table IV for each province. Repeating this operation for the in-born population of each province will yield  $11 \times 13$  matrices of estimates of intercensal net migration. These estimates are the net changes due to the migration of in-born population of a given province with respect to that province and with respect to each of the other 10 provinces (Table VI). Thus, net change due to migration,  $m_{ij}$  is:

$$m_{ij} = {}^E p_{ij}(x+n, 61) - p_{ij}(x+n, 61) \quad [3]$$

**Table VI – Net Migration of In-born by Province, 1951-1961**  
**Newfoundland**

Province of gain or loss through migration	Five-year age groups				
	10-14	15-19	20-24	70+	Total 10+
Nfld. ....					
P.E.I. ....					
N.S. ....					
N.B. ....					
Que. ....					
Ont. ....					
Man. ....					
Sask. ....					
Alta. ....					
B.C. ....					
Y.T. and N.W.T. ..					
All provinces ...					

SOURCE: Table IV minus Table V for each province.

#### **B.4 REARRANGEMENT OF DATA IN TABLE VI FOR DERIVING NET MIGRATION OF IN-BORN AND NET MIGRATION OF OUT-BORN CLASSIFIED BY PROVINCE OF BIRTH**

From Table VI collect lines 1 for Newfoundland, lines 2 for Prince Edward Island, etc., and form Table VII. There will be 11 tables, one table for each province.

**Table VII – Net Migration of In-born and Net Migration of  
Out-born Classified by Province of Birth, 1951- 1961**  
**Newfoundland**

Province of birth	Five-year age groups				
	10- 14	15- 19	20- 24	70 +	Total 10+
Nfld. ....					
P.E.I. ....					
N.S. ....					
N.B. ....					
Que. ....					
Ont. ....					
Man. ....					
Sask. ....					
Alta. ....					
B.C. ....					
Y.T. and N.W.T. ...					
All provinces ....					

SOURCE: Lines 1 of Table VI for Newfoundland.

Lines 2 of Table VI for P.E.I., etc.

#### **B.5 DERIVATION OF INTERCENSAL NET MIGRATION OF IN-BORN, OUT-BORN AND NET BALANCE OF MIGRATION BY PROVINCE**

From Table VII, it is possible to separate the intercensal net migration of in-born and the out-born and obtain the net balance of migration for each province. In each provincial table (Table VII), the figures for the in-born (mostly net out-migration) by age appear on the line that corresponds to that particular province (line 1 in the table for Newfoundland, line 2 for Prince Edward Island, etc.), where  $i = j$ . For each province, the figures of the out-born (mostly net in-migration) appear on the remaining lines according to the various provinces of birth. The figures in the line for "all provinces" give the net balance of net migration of the in-born and net migration of the out-born for each age-sex group for each province. These are presented in Table A.1.



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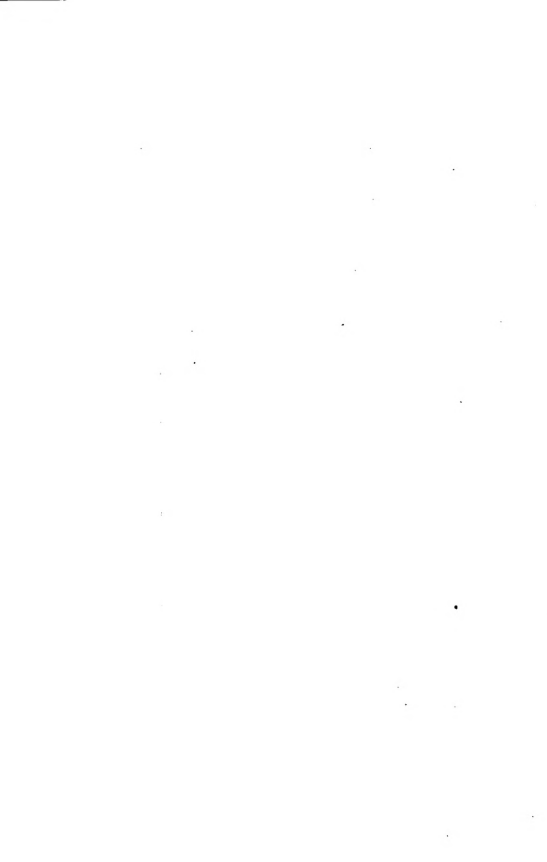
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*The Census Monograph studies listed above were published during 1968 and 1969 or were in the printing process at the end of the latter year. At that time, the sixth title was available in French only and the eighth and eleventh were available in English and French. The list will be augmented as work on other studies progresses. Copies may be secured from the Queen's Printer, Ottawa, or the Dominion Bureau of Statistics (Publications Distribution Unit).*













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